FIG. 1

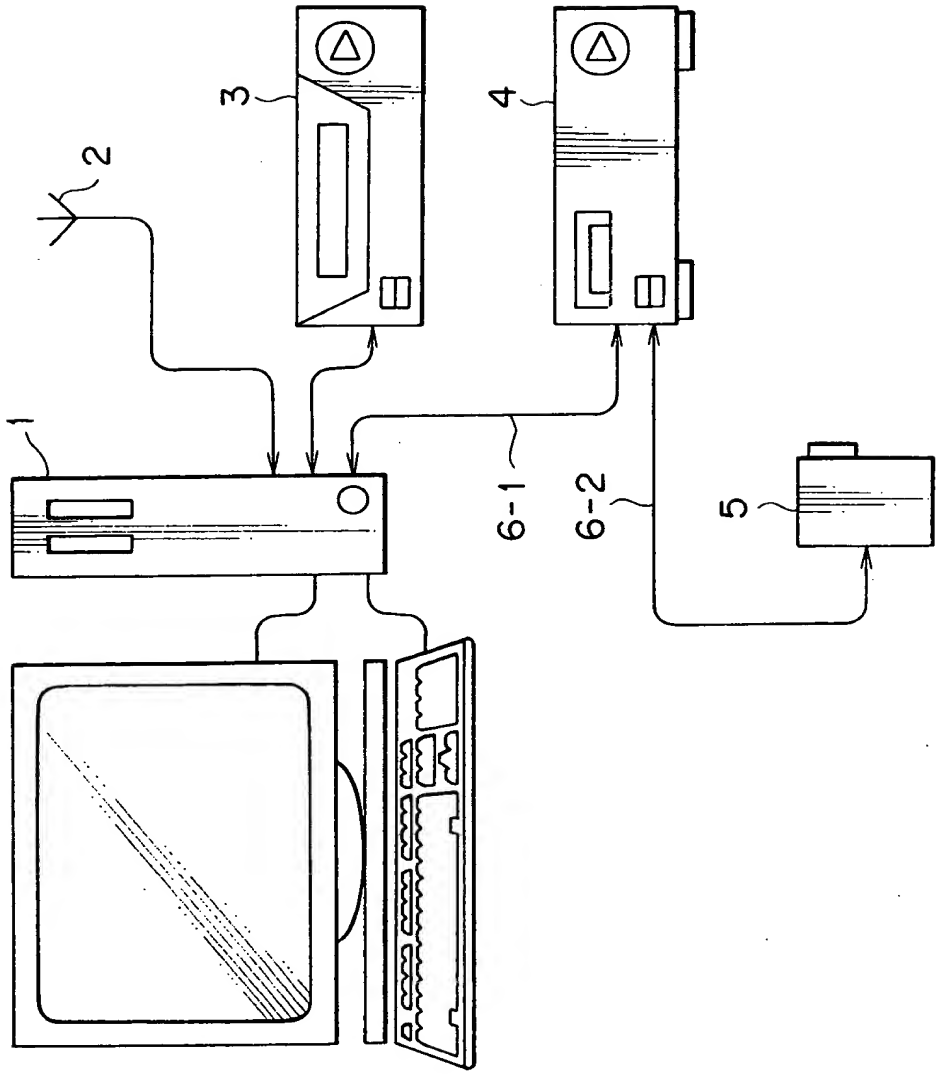

FIG. 2

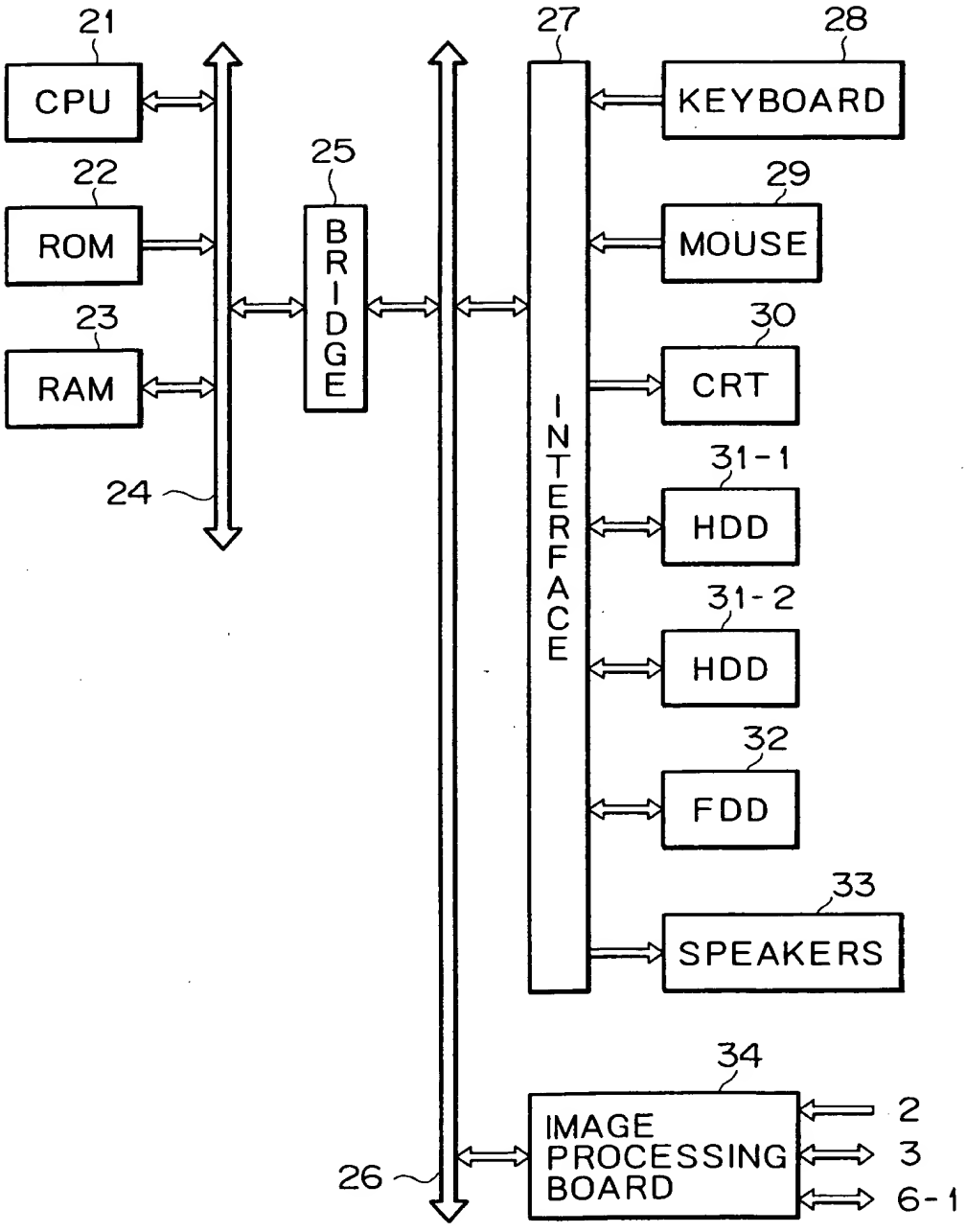
21
CPU
22
ROM
23
RAM
24
25
BRIDGE
26
27
INTERFACE
28
KEYBOARD
29
MOUSE
30
CRT
31-1
HDD
31-2
HDD
32
FDD
33
SPEAKERS
34
IMAGE PROCESSING BOARD
2
3
6-1

FIG. 3

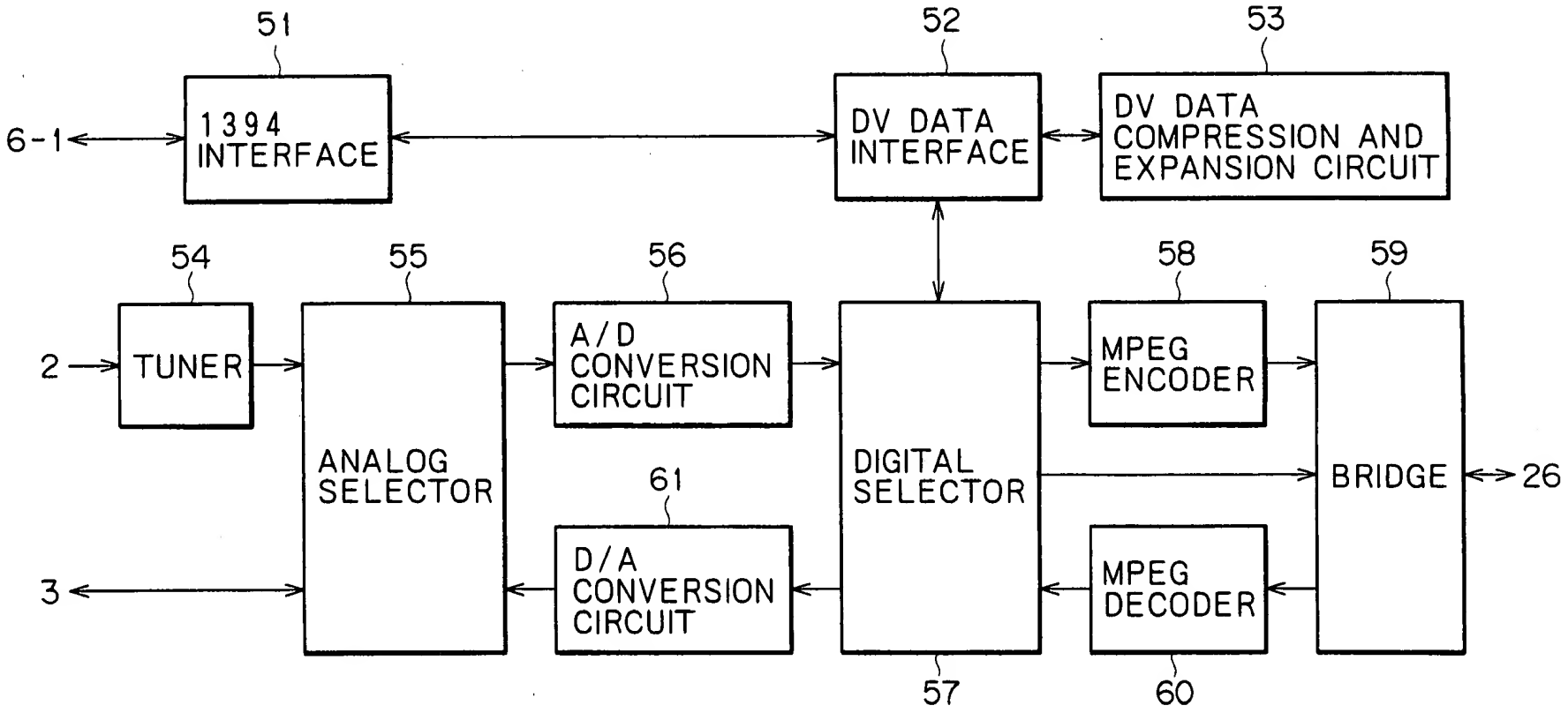
51
52
53
6-1
1394 INTERFACE
DV DATA INTERFACE
DV DATA COMPRESSION AND EXPANSION CIRCUIT
54
55
56
58
59
2
TUNER
ANALOG SELECTOR
A/D CONVERSION CIRCUIT
DIGITAL SELECTOR
MPEG ENCODER
BRIDGE
26
61
3
D/A CONVERSION CIRCUIT
MPEG DECODER
57
60

FIG. 4

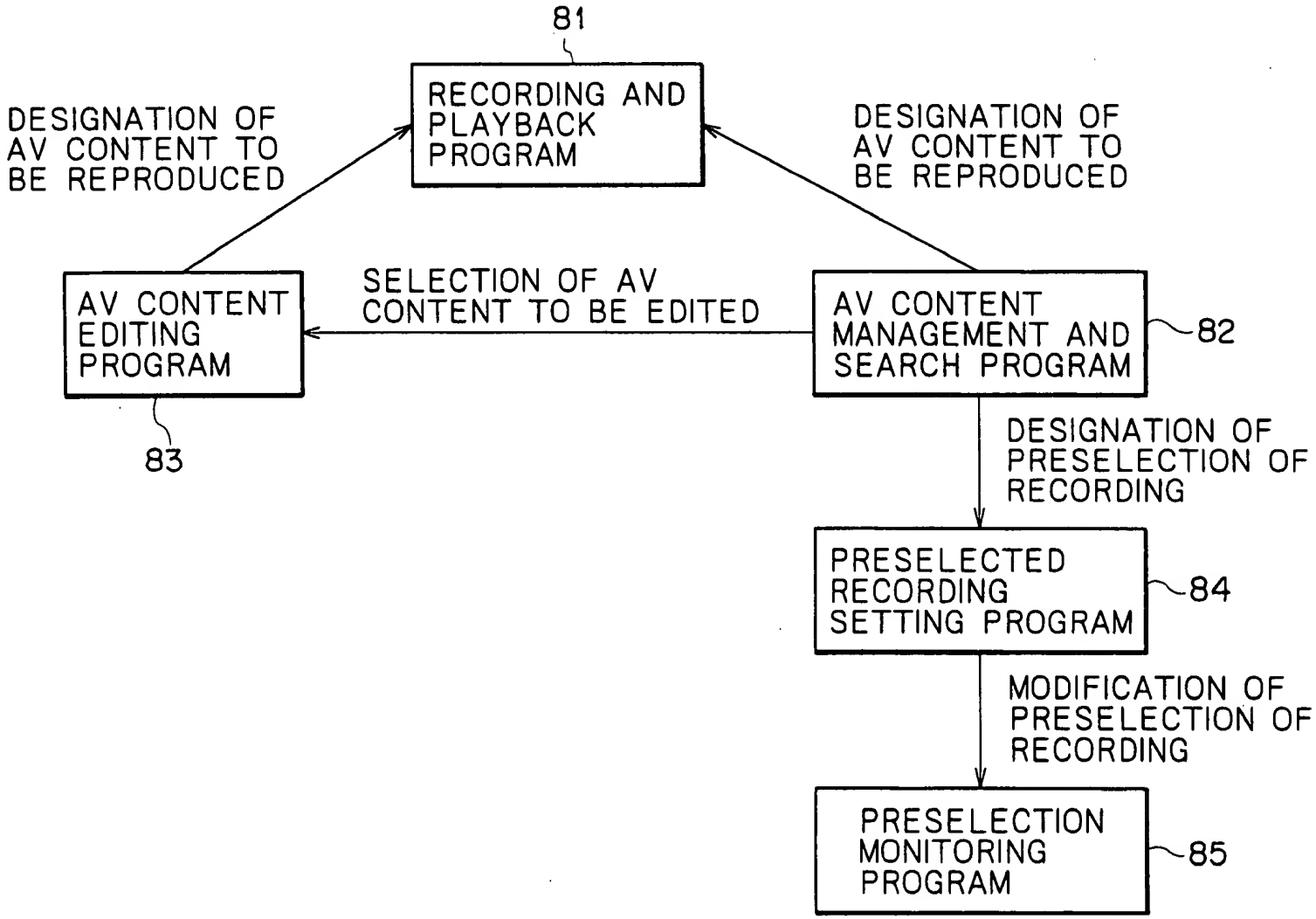
81
RECORDING AND PLAYBACK PROGRAM
DESIGNATION OF AV CONTENT TO BE REPRODUCED
DESIGNATION OF AV CONTENT TO BE REPRODUCED
AV CONTENT EDITING PROGRAM
SELECTION OF AV CONTENT TO BE EDITED
AV CONTENT MANAGEMENT AND SEARCH PROGRAM
82
83
DESIGNATION OF PRESELECTION OF RECORDING
PRESELECTED RECORDING SETTING PROGRAM
84
MODIFICATION OF PRESELECTION OF RECORDING
PRESELECTION MONITORING PROGRAM
85

FIG. 5

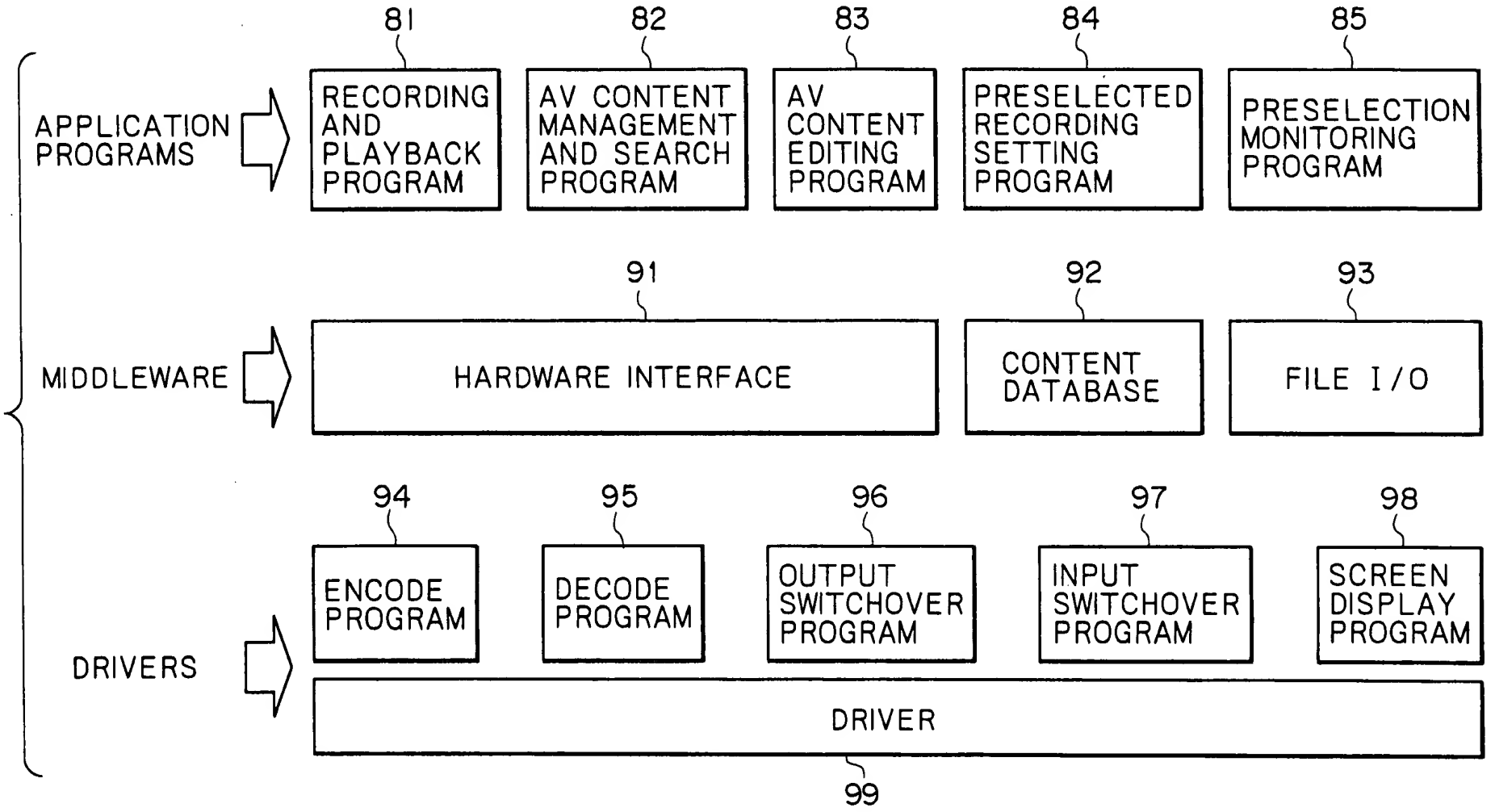
81
82
83
84
85
APPLICATION PROGRAMS
RECORDING AND PLAYBACK PROGRAM
AV CONTENT MANAGEMENT AND SEARCH PROGRAM
AV CONTENT EDITING PROGRAM
PRESELECTED RECORDING SETTING PROGRAM
PRESELECTION MONITORING PROGRAM
91
92
93
MIDDLEWARE
HARDWARE INTERFACE
CONTENT DATABASE
FILE I/O
94
95
96
97
98
DRIVERS
ENCODE PROGRAM
DECODE PROGRAM
OUTPUT SWITCHOVER PROGRAM
INPUT SWITCHOVER PROGRAM
SCREEN DISPLAY PROGRAM
DRIVER
99

FIG. 6

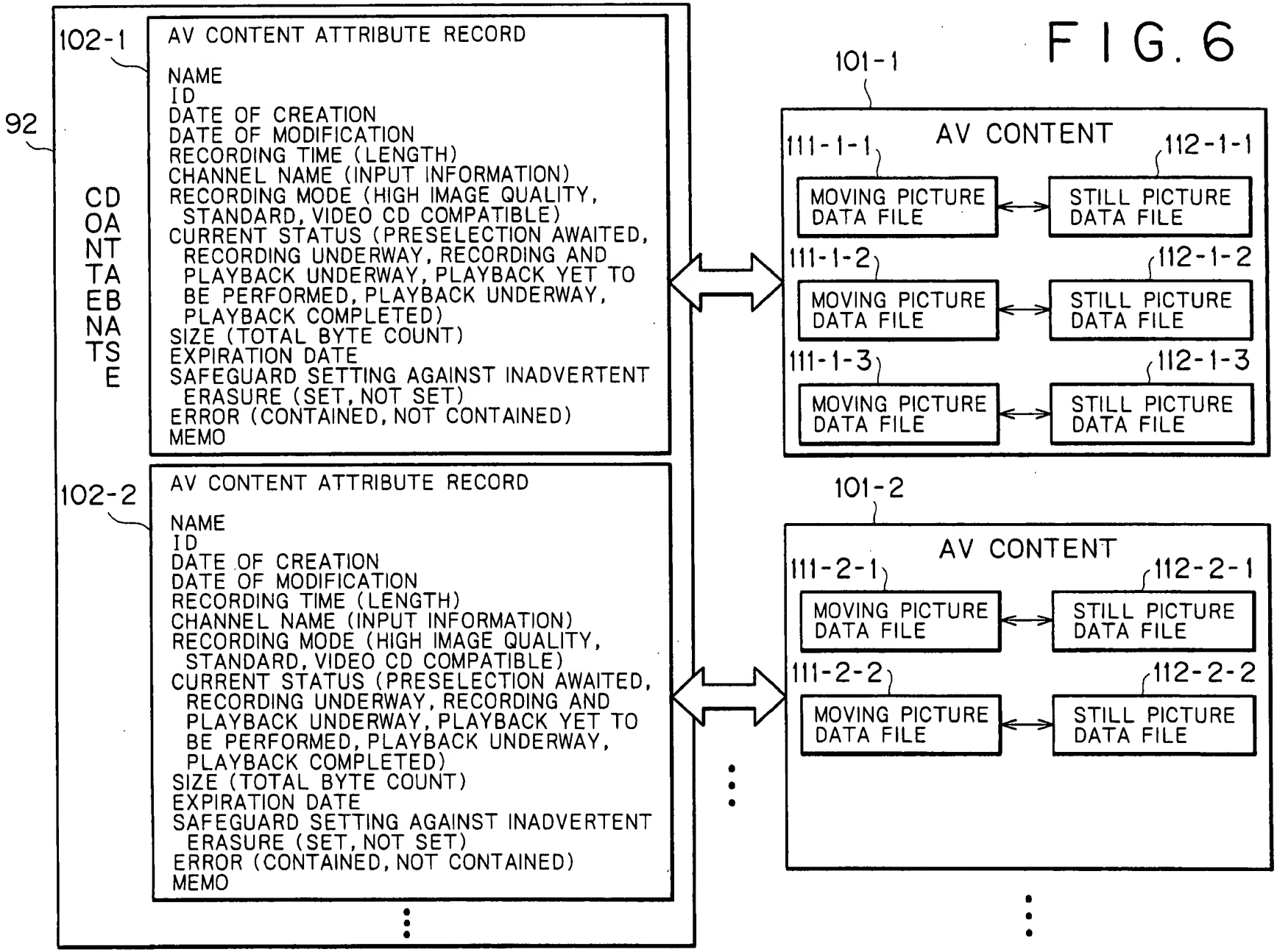
92
CD OA NT TA EB NA TS E
102-1
AV CONTENT ATTRIBUTE RECORD
NAME
ID
DATE OF CREATION
DATE OF MODIFICATION
RECORDING TIME (LENGTH)
CHANNEL NAME (INPUT INFORMATION)
RECORDING MODE (HIGH IMAGE QUALITY, STANDARD, VIDEO CD COMPATIBLE)
CURRENT STATUS (PRESELECTION AWAITED, RECORDING UNDERWAY, RECORDING AND PLAYBACK UNDERWAY, PLAYBACK YET TO BE PERFORMED, PLAYBACK UNDERWAY, PLAYBACK COMPLETED)
SIZE (TOTAL BYTE COUNT)
EXPIRATION DATE
SAFEGUARD SETTING AGAINST INADVERTENT ERASURE (SET, NOT SET)
ERROR (CONTAINED, NOT CONTAINED)
MEMO
102-2
AV CONTENT ATTRIBUTE RECORD
NAME
ID
DATE OF CREATION
DATE OF MODIFICATION
RECORDING TIME (LENGTH)
CHANNEL NAME (INPUT INFORMATION)
RECORDING MODE (HIGH IMAGE QUALITY, STANDARD, VIDEO CD COMPATIBLE)
CURRENT STATUS (PRESELECTION AWAITED, RECORDING UNDERWAY, RECORDING AND PLAYBACK UNDERWAY, PLAYBACK YET TO BE PERFORMED, PLAYBACK UNDERWAY, PLAYBACK COMPLETED)
SIZE (TOTAL BYTE COUNT)
EXPIRATION DATE
SAFEGUARD SETTING AGAINST INADVERTENT ERASURE (SET, NOT SET)
ERROR (CONTAINED, NOT CONTAINED)
MEMO
101-1
AV CONTENT
111-1-1
MOVING PICTURE DATA FILE
112-1-1
STILL PICTURE DATA FILE
111-1-2
MOVING PICTURE DATA FILE
112-1-2
STILL PICTURE DATA FILE
111-1-3
MOVING PICTURE DATA FILE
112-1-3
STILL PICTURE DATA FILE
101-2
AV CONTENT
111-2-1
MOVING PICTURE DATA FILE
112-2-1
STILL PICTURE DATA FILE
111-2-2
MOVING PICTURE DATA FILE
112-2-2
STILL PICTURE DATA FILE

FIG. 7

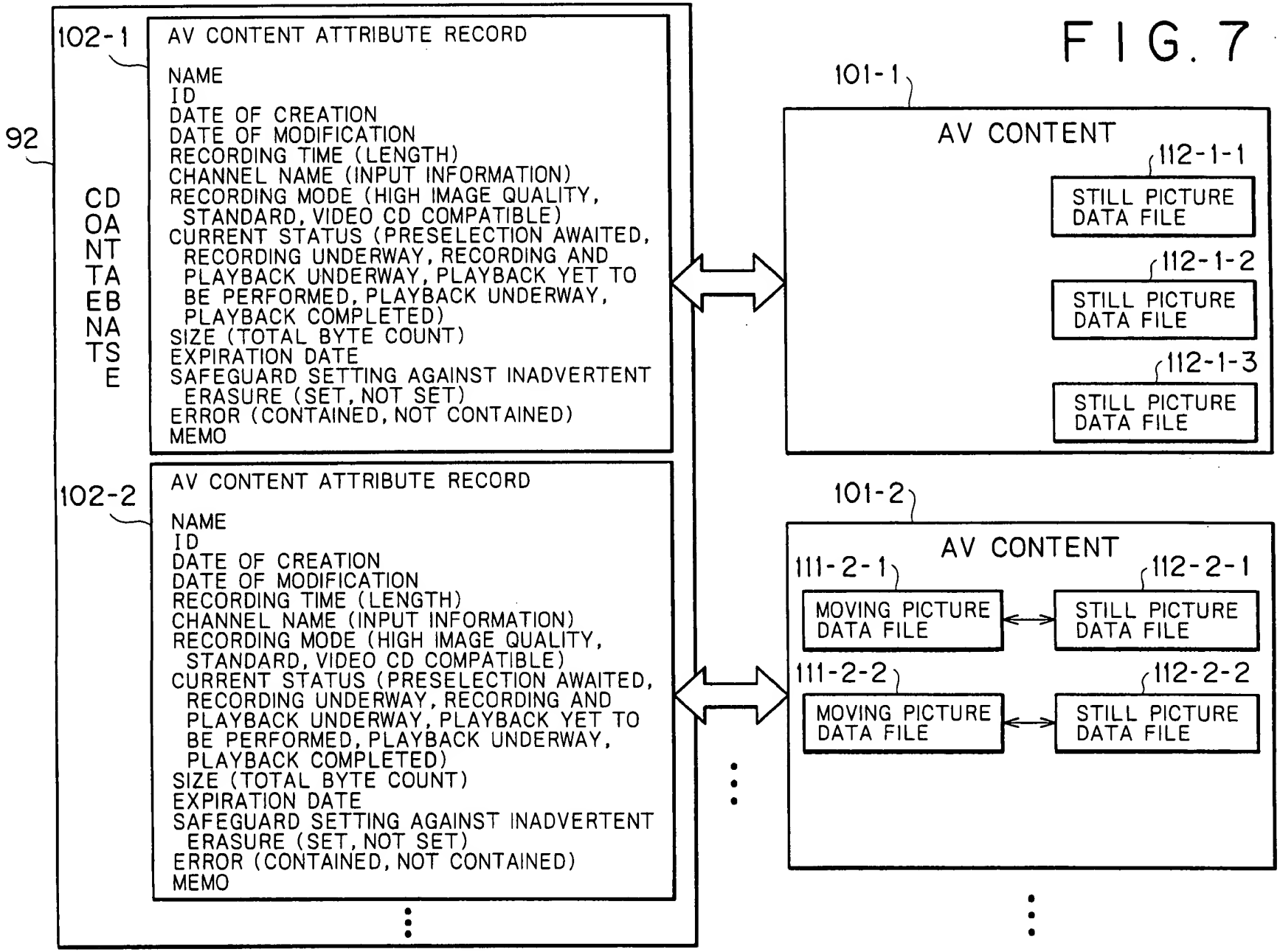
92
CD OA NT TA EB NA TS E
102-1
AV CONTENT ATTRIBUTE RECORD
NAME
ID
DATE OF CREATION
DATE OF MODIFICATION
RECORDING TIME (LENGTH)
CHANNEL NAME (INPUT INFORMATION)
RECORDING MODE (HIGH IMAGE QUALITY, STANDARD, VIDEO CD COMPATIBLE)
CURRENT STATUS (PRESELECTION AWAITED, RECORDING UNDERWAY, RECORDING AND PLAYBACK UNDERWAY, PLAYBACK YET TO BE PERFORMED, PLAYBACK UNDERWAY, PLAYBACK COMPLETED)
SIZE (TOTAL BYTE COUNT)
EXPIRATION DATE
SAFEGUARD SETTING AGAINST INADVERTENT ERASURE (SET, NOT SET)
ERROR (CONTAINED, NOT CONTAINED)
MEMO
102-2
AV CONTENT ATTRIBUTE RECORD
NAME
ID
DATE OF CREATION
DATE OF MODIFICATION
RECORDING TIME (LENGTH)
CHANNEL NAME (INPUT INFORMATION)
RECORDING MODE (HIGH IMAGE QUALITY, STANDARD, VIDEO CD COMPATIBLE)
CURRENT STATUS (PRESELECTION AWAITED, RECORDING UNDERWAY, RECORDING AND PLAYBACK UNDERWAY, PLAYBACK YET TO BE PERFORMED, PLAYBACK UNDERWAY, PLAYBACK COMPLETED)
SIZE (TOTAL BYTE COUNT)
EXPIRATION DATE
SAFEGUARD SETTING AGAINST INADVERTENT ERASURE (SET, NOT SET)
ERROR (CONTAINED, NOT CONTAINED)
MEMO
101-1
AV CONTENT
112-1-1
STILL PICTURE DATA FILE
112-1-2
STILL PICTURE DATA FILE
112-1-3
STILL PICTURE DATA FILE
101-2
AV CONTENT
111-2-1
MOVING PICTURE DATA FILE
112-2-1
STILL PICTURE DATA FILE
111-2-2
MOVING PICTURE DATA FILE
112-2-2
STILL PICTURE DATA FILE

FIG. 8

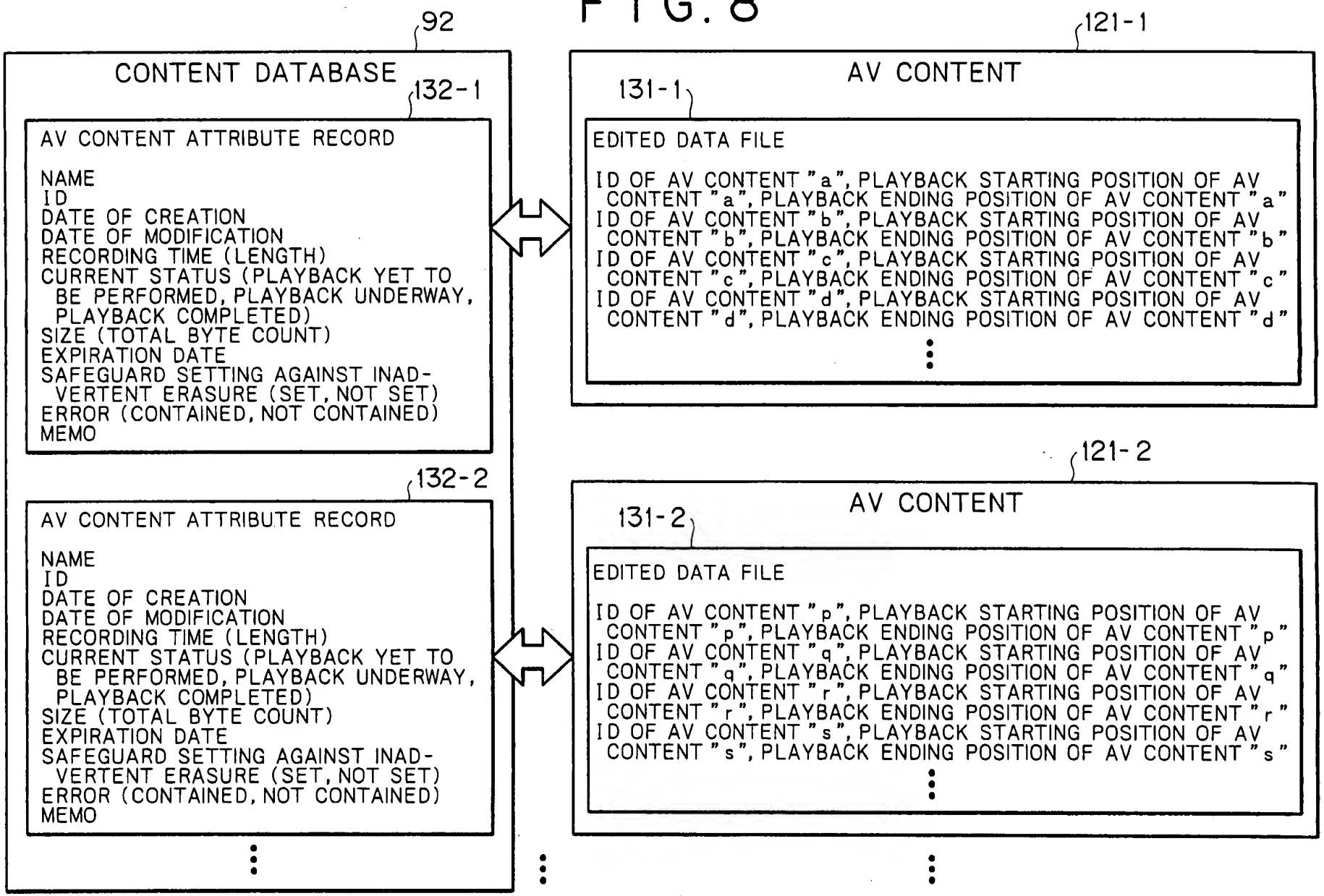
92
CONTENT DATABASE
132-1
AV CONTENT ATTRIBUTE RECORD
NAME
ID
DATE OF CREATION
DATE OF MODIFICATION
RECORDING TIME (LENGTH)
CURRENT STATUS (PLAYBACK YET TO BE PERFORMED, PLAYBACK UNDERWAY, PLAYBACK COMPLETED)
SIZE (TOTAL BYTE COUNT)
EXPIRATION DATE
SAFEGUARD SETTING AGAINST INADVERTENT ERASURE (SET, NOT SET)
ERROR (CONTAINED, NOT CONTAINED)
MEMO
132-2
AV CONTENT ATTRIBUTE RECORD
NAME
ID
DATE OF CREATION
DATE OF MODIFICATION
RECORDING TIME (LENGTH)
CURRENT STATUS (PLAYBACK YET TO BE PERFORMED, PLAYBACK UNDERWAY, PLAYBACK COMPLETED)
SIZE (TOTAL BYTE COUNT)
EXPIRATION DATE
SAFEGUARD SETTING AGAINST INADVERTENT ERASURE (SET, NOT SET)
ERROR (CONTAINED, NOT CONTAINED)
MEMO
121-1
AV CONTENT
131-1
EDITED DATA FILE
ID OF AV CONTENT "a", PLAYBACK STARTING POSITION OF AV CONTENT "a", PLAYBACK ENDING POSITION OF AV CONTENT "a"
ID OF AV CONTENT "b", PLAYBACK STARTING POSITION OF AV CONTENT "b", PLAYBACK ENDING POSITION OF AV CONTENT "b"
ID OF AV CONTENT "c", PLAYBACK STARTING POSITION OF AV CONTENT "c", PLAYBACK ENDING POSITION OF AV CONTENT "c"
ID OF AV CONTENT "d", PLAYBACK STARTING POSITION OF AV CONTENT "d", PLAYBACK ENDING POSITION OF AV CONTENT "d"
121-2
AV CONTENT
131-2
EDITED DATA FILE
ID OF AV CONTENT "p", PLAYBACK STARTING POSITION OF AV CONTENT "p", PLAYBACK ENDING POSITION OF AV CONTENT "p"
ID OF AV CONTENT "q", PLAYBACK STARTING POSITION OF AV CONTENT "q", PLAYBACK ENDING POSITION OF AV CONTENT "q"
ID OF AV CONTENT "r", PLAYBACK STARTING POSITION OF AV CONTENT "r", PLAYBACK ENDING POSITION OF AV CONTENT "r"
ID OF AV CONTENT "s", PLAYBACK STARTING POSITION OF AV CONTENT "s", PLAYBACK ENDING POSITION OF AV CONTENT "s"

FIG. 9

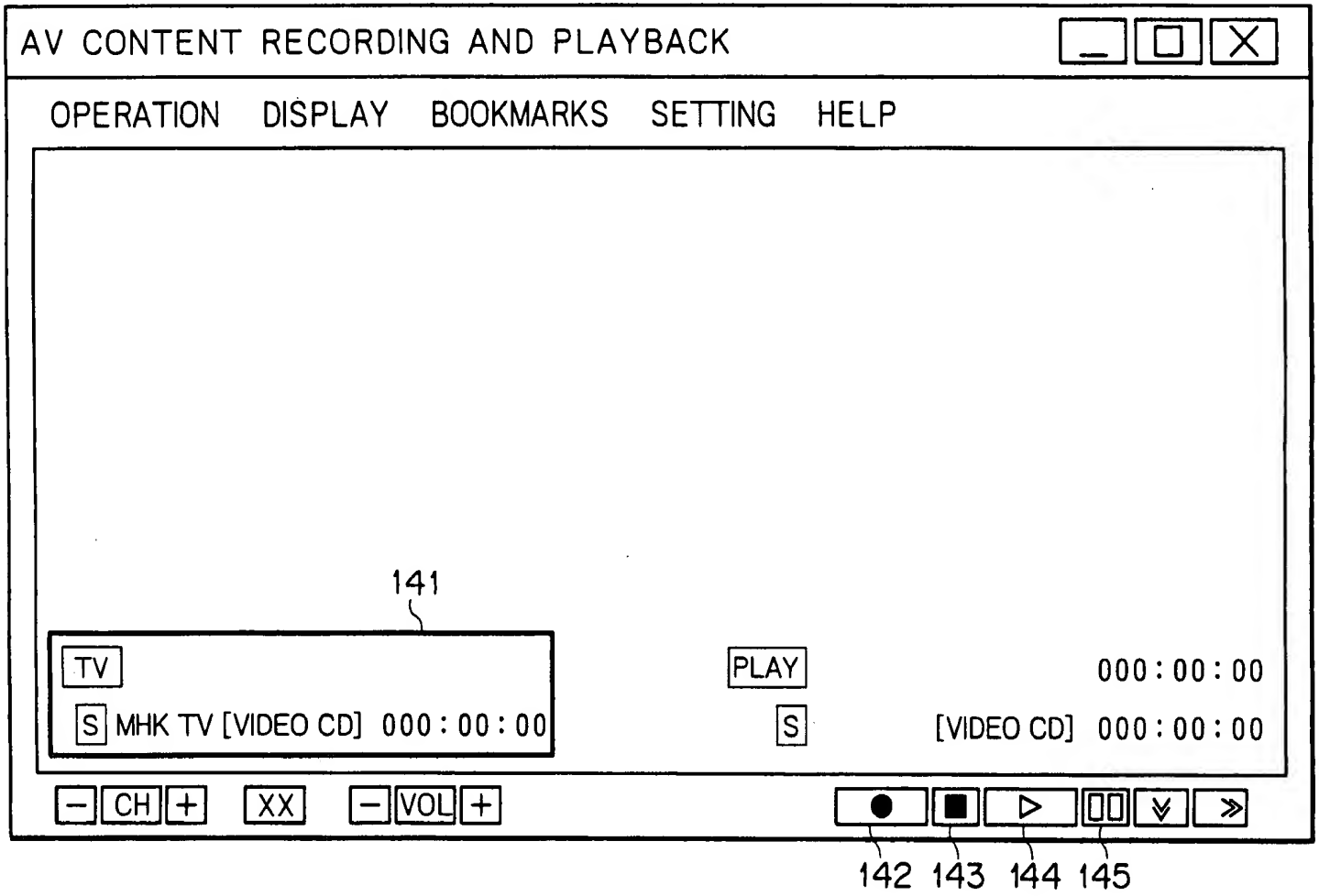
AV CONTENT RECORDING AND PLAYBACK
OPERATION
DISPLAY
BOOKMARKS
SETTING
HELP
141
TV
S MHK TV [VIDEO CD] 000 : 00 : 00
PLAY
000 : 00 : 00
S
[VIDEO CD] 000 : 00 : 00
CH
XX
VOL
142
143
144
145

FIG. 10

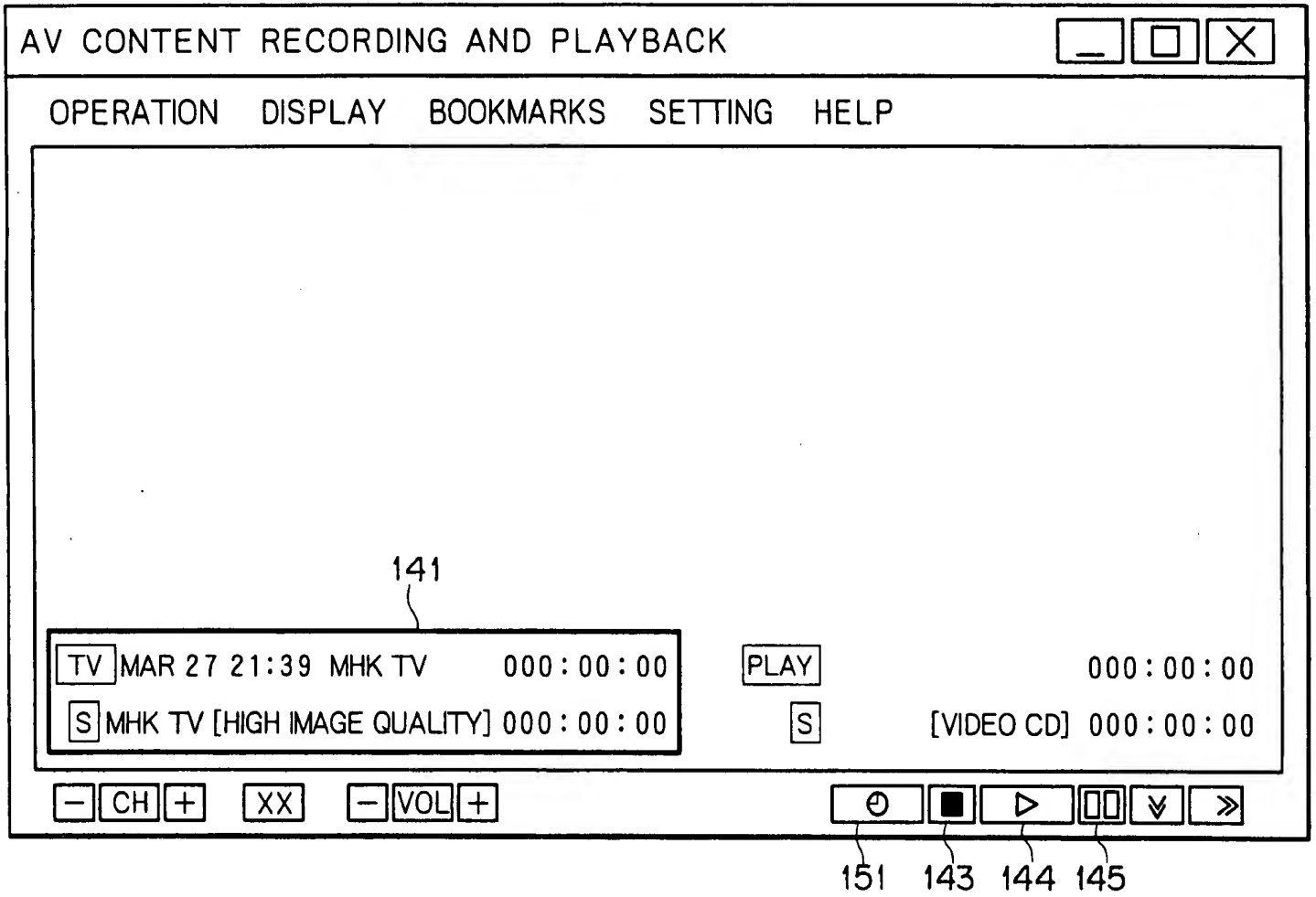
AV CONTENT RECORDING AND PLAYBACK
OPERATION
DISPLAY
BOOKMARKS
SETTING
HELP
141
TV MAR 27 21:39 MHK TV 000:00:00
S MHK TV [HIGH IMAGE QUALITY] 000:00:00
PLAY
000:00:00
S
[VIDEO CD] 000:00:00
CH
XX
VOL
151
143
144
145

FIG. 11A

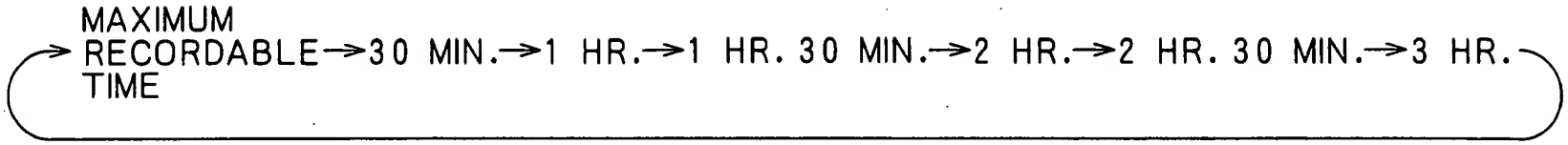

FIG. 11B

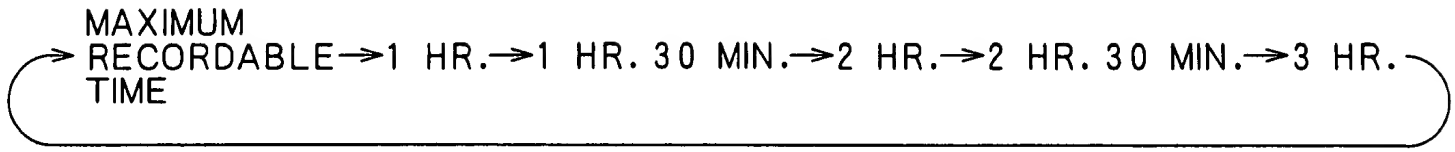

FIG. 11C

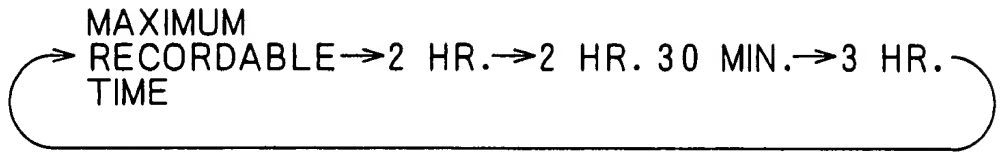

FIG.12

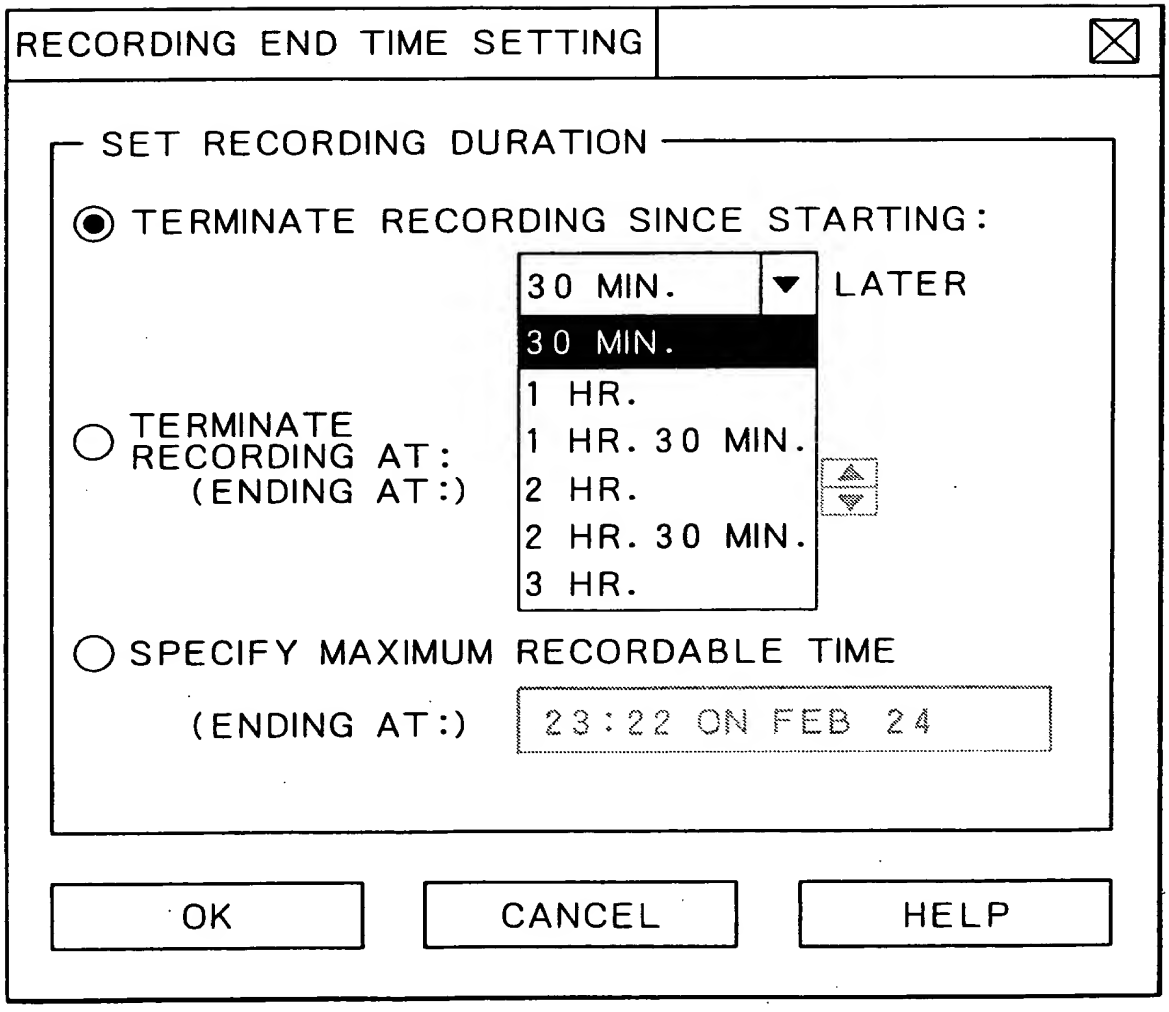
RECORDING END TIME SETTING
SET RECORDING DURATION
TERMINATE RECORDING SINCE STARTING:
30 MIN.
LATER
30 MIN.
1 HR.
1 HR. 30 MIN.
2 HR.
2 HR. 30 MIN.
3 HR.
TERMINATE RECORDING AT: (ENDING AT:)
SPECIFY MAXIMUM RECORDABLE TIME
(ENDING AT:)
23:22 ON FEB 24
OK
CANCEL
HELP

FIG.13

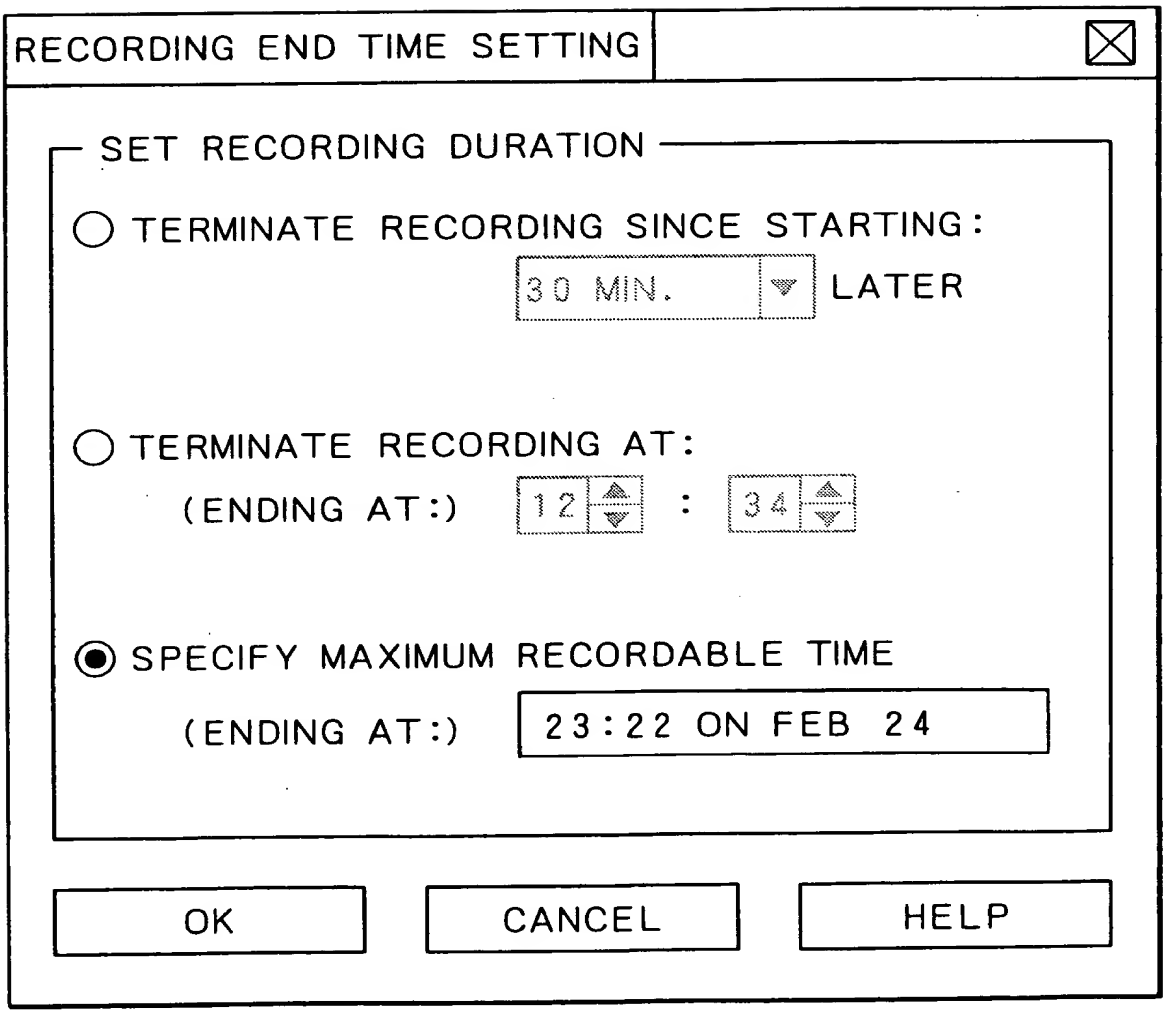
RECORDING END TIME SETTING
SET RECORDING DURATION
TERMINATE RECORDING SINCE STARTING:
30 MIN.
LATER
TERMINATE RECORDING AT:
(ENDING AT:)
12
34
SPECIFY MAXIMUM RECORDABLE TIME
(ENDING AT:)
23:22 ON FEB 24
OK
CANCEL
HELP

FIG. 14

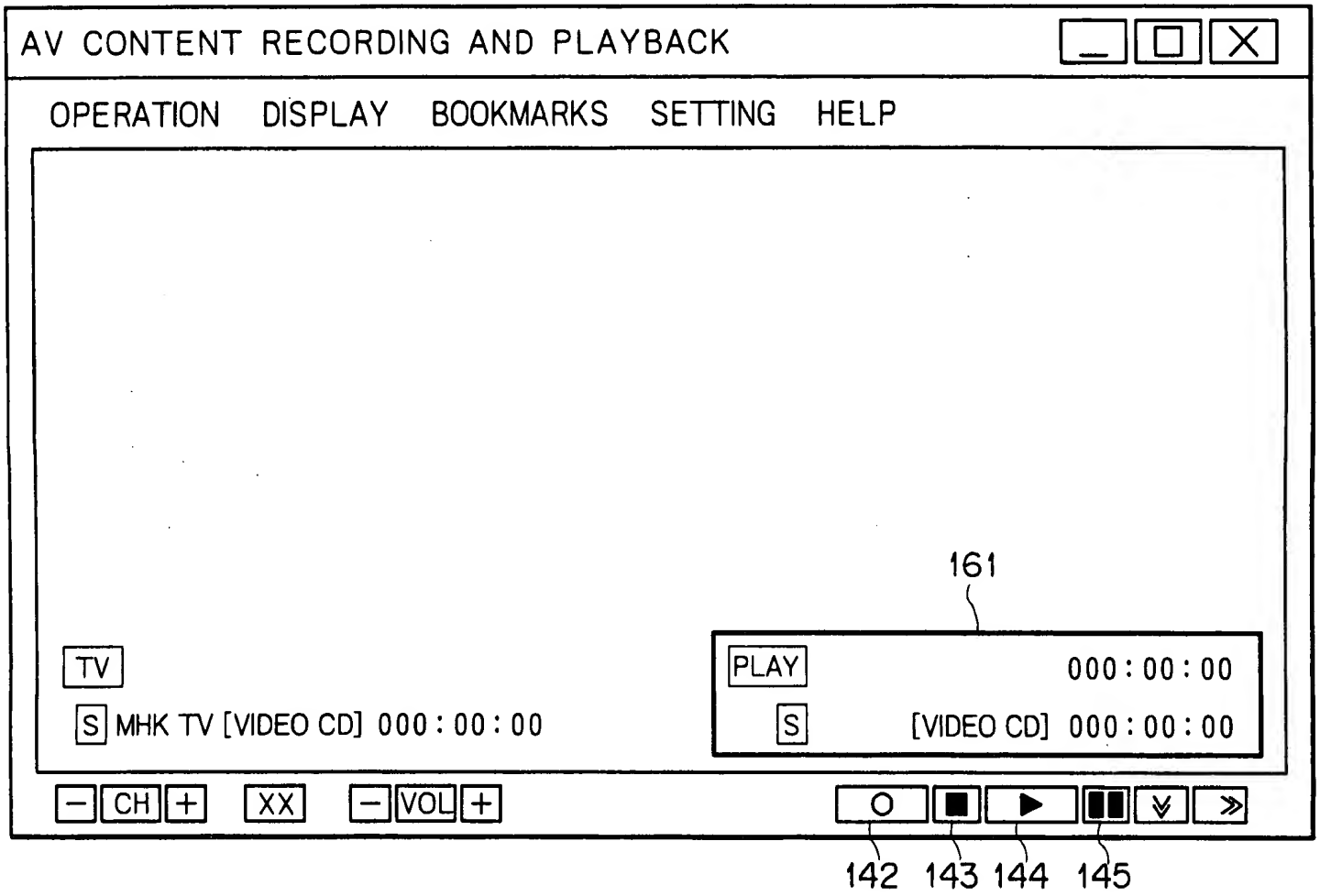
AV CONTENT RECORDING AND PLAYBACK
OPERATION
DISPLAY
BOOKMARKS
SETTING
HELP
161
TV
S MHK TV [VIDEO CD] 000 : 00 : 00
PLAY
000 : 00 : 00
S
[VIDEO CD] 000 : 00 : 00
CH
XX
VOL
142
143
144
145

FIG. 15

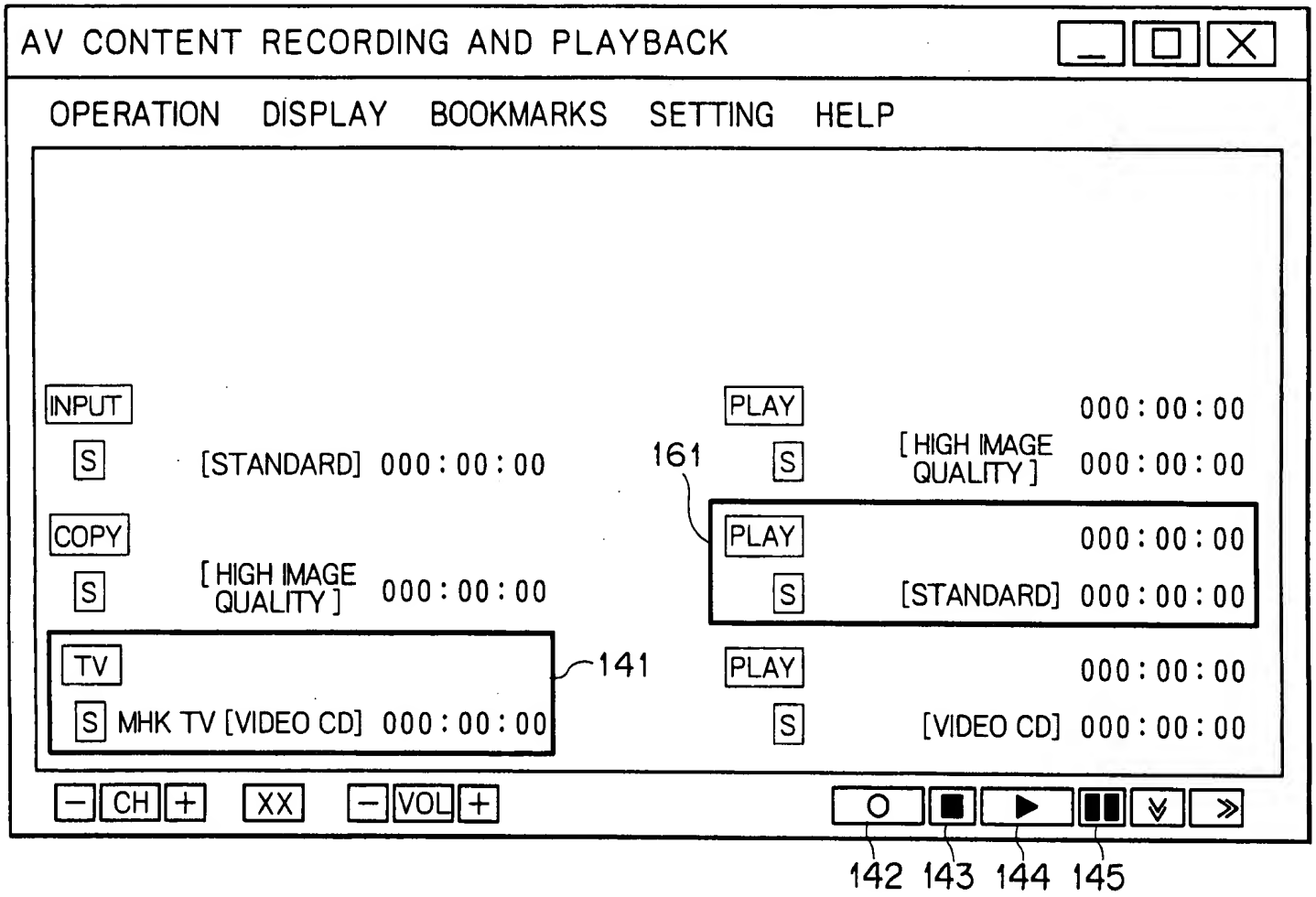
AV CONTENT RECORDING AND PLAYBACK
OPERATION
DISPLAY
BOOKMARKS
SETTING
HELP
INPUT
S
[STANDARD] 000:00:00
COPY
S
[HIGH IMAGE QUALITY] 000:00:00
TV
S MHK TV [VIDEO CD] 000:00:00
141
161
PLAY
S
000:00:00
[HIGH IMAGE QUALITY] 000:00:00
PLAY
000:00:00
S
[STANDARD] 000:00:00
PLAY
000:00:00
S
[VIDEO CD] 000:00:00
CH
XX
VOL
142
143
144
145

FIG. 16

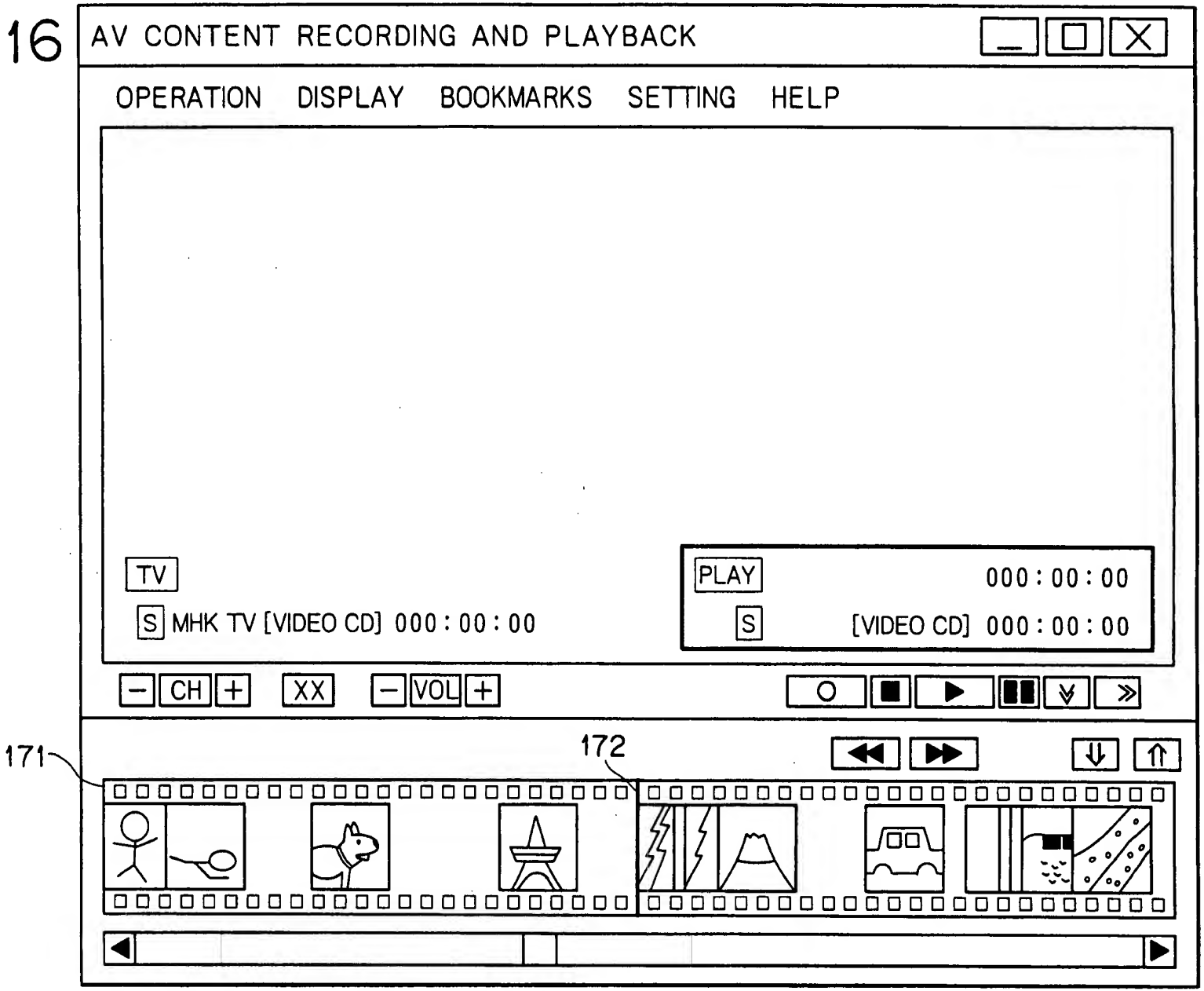

FIG.17

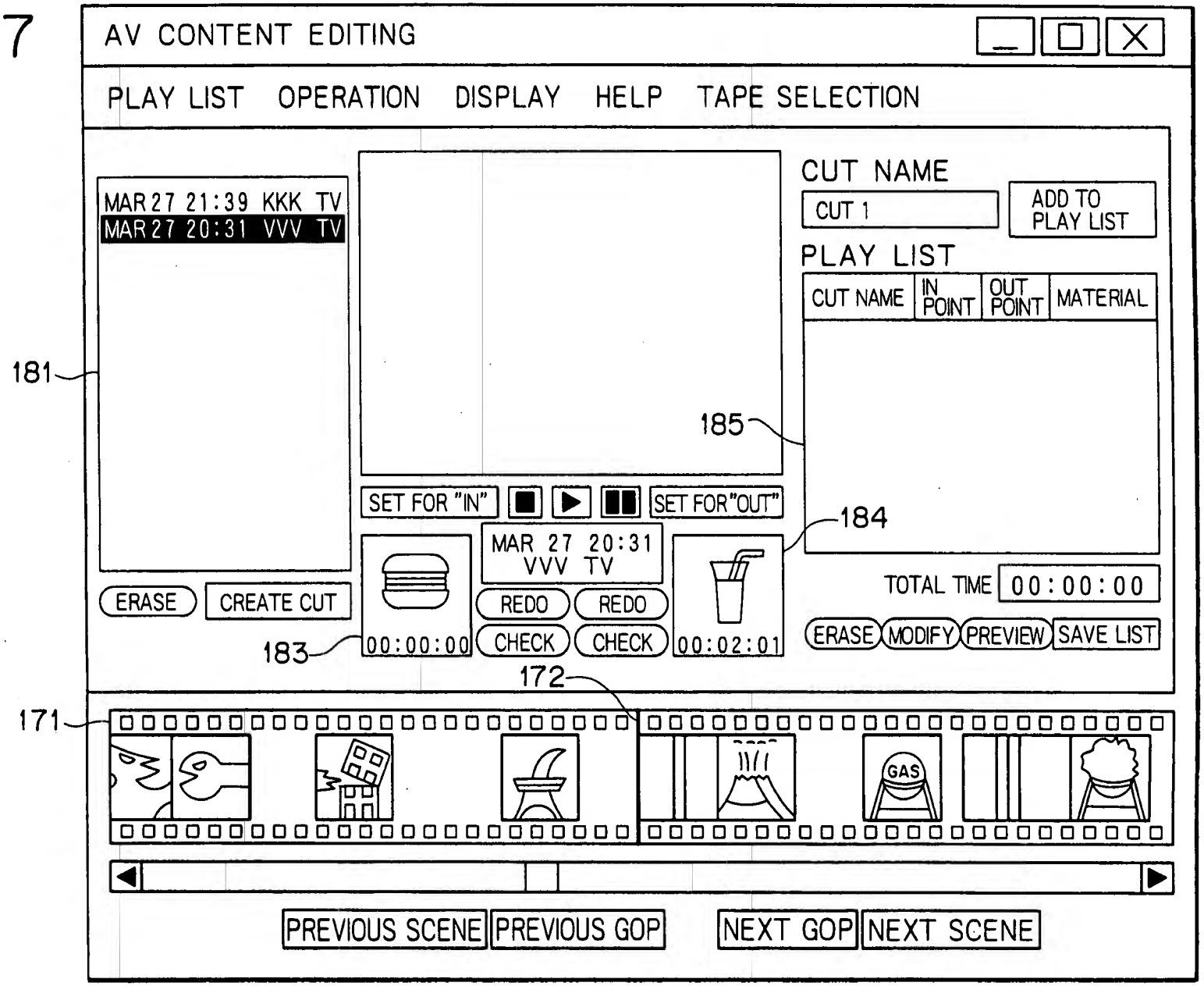
AV CONTENT EDITING
PLAY LIST
OPERATION
DISPLAY
HELP
TAPE SELECTION
MAR 27 21:39 KKK TV
MAR 27 20:31 VVV TV
181
CUT NAME
CUT 1
ADD TO PLAY LIST
PLAY LIST
CUT NAME
IN POINT
OUT POINT
MATERIAL
185
SET FOR "IN"
SET FOR "OUT"
184
MAR 27 20:31 VVV TV
REDO
REDO
CHECK
CHECK
00:00:00
00:02:01
183
TOTAL TIME
00:00:00
ERASE
CREATE CUT
ERASE
MODIFY
PREVIEW
SAVE LIST
172
171
GAS
PREVIOUS SCENE
PREVIOUS GOP
NEXT GOP
NEXT SCENE

FIG. 18

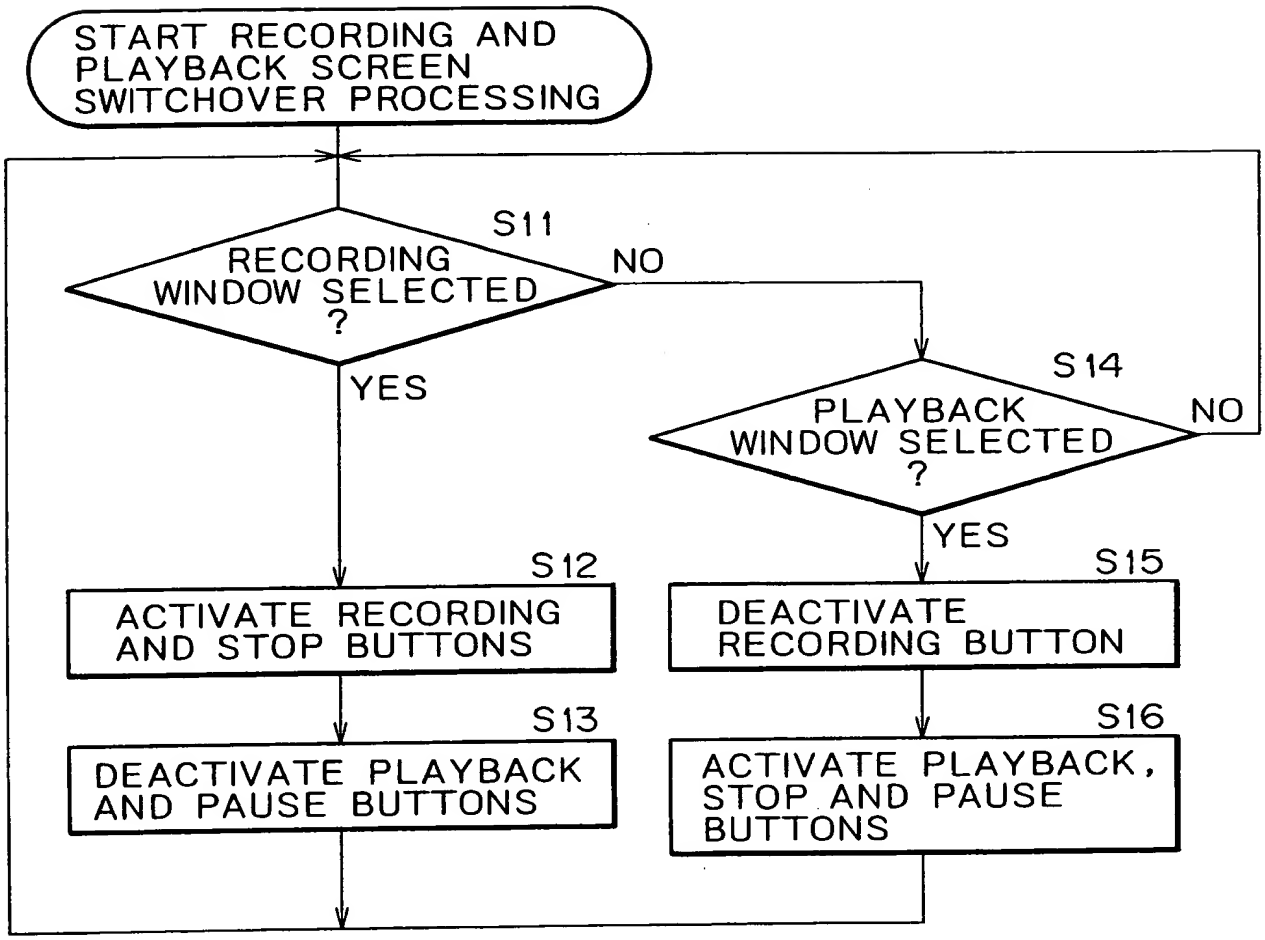
START RECORDING AND PLAYBACK SCREEN SWITCHOVER PROCESSING
S11
RECORDING WINDOW SELECTED ?
NO
YES
S14
PLAYBACK WINDOW SELECTED ?
NO
YES
S12
ACTIVATE RECORDING AND STOP BUTTONS
S13
DEACTIVATE PLAYBACK AND PAUSE BUTTONS
S15
DEACTIVATE RECORDING BUTTON
S16
ACTIVATE PLAYBACK, STOP AND PAUSE BUTTONS

FIG. 19

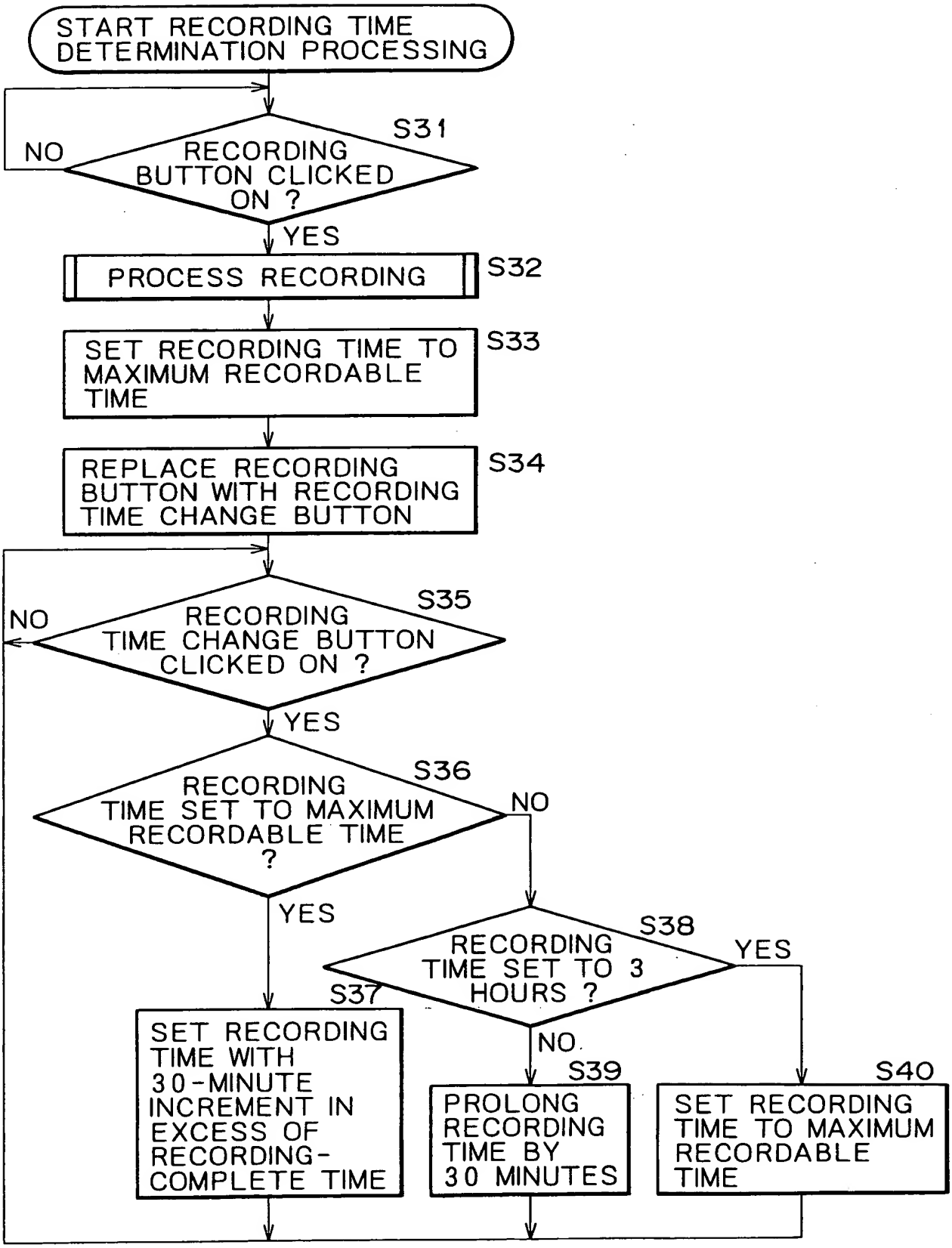
START RECORDING TIME DETERMINATION PROCESSING
S31
NO
RECORDING BUTTON CLICKED ON ?
YES
PROCESS RECORDING
S32
SET RECORDING TIME TO MAXIMUM RECORDABLE TIME
S33
REPLACE RECORDING BUTTON WITH RECORDING TIME CHANGE BUTTON
S34
S35
NO
RECORDING TIME CHANGE BUTTON CLICKED ON ?
YES
S36
RECORDING TIME SET TO MAXIMUM RECORDABLE TIME ?
NO
YES
S38
RECORDING TIME SET TO 3 HOURS ?
YES
S37
NO
S39
S40
SET RECORDING TIME WITH 30-MINUTE INCREMENT IN EXCESS OF RECORDING-COMPLETE TIME
PROLONG RECORDING TIME BY 30 MINUTES
SET RECORDING TIME TO MAXIMUM RECORDABLE TIME

FIG. 20

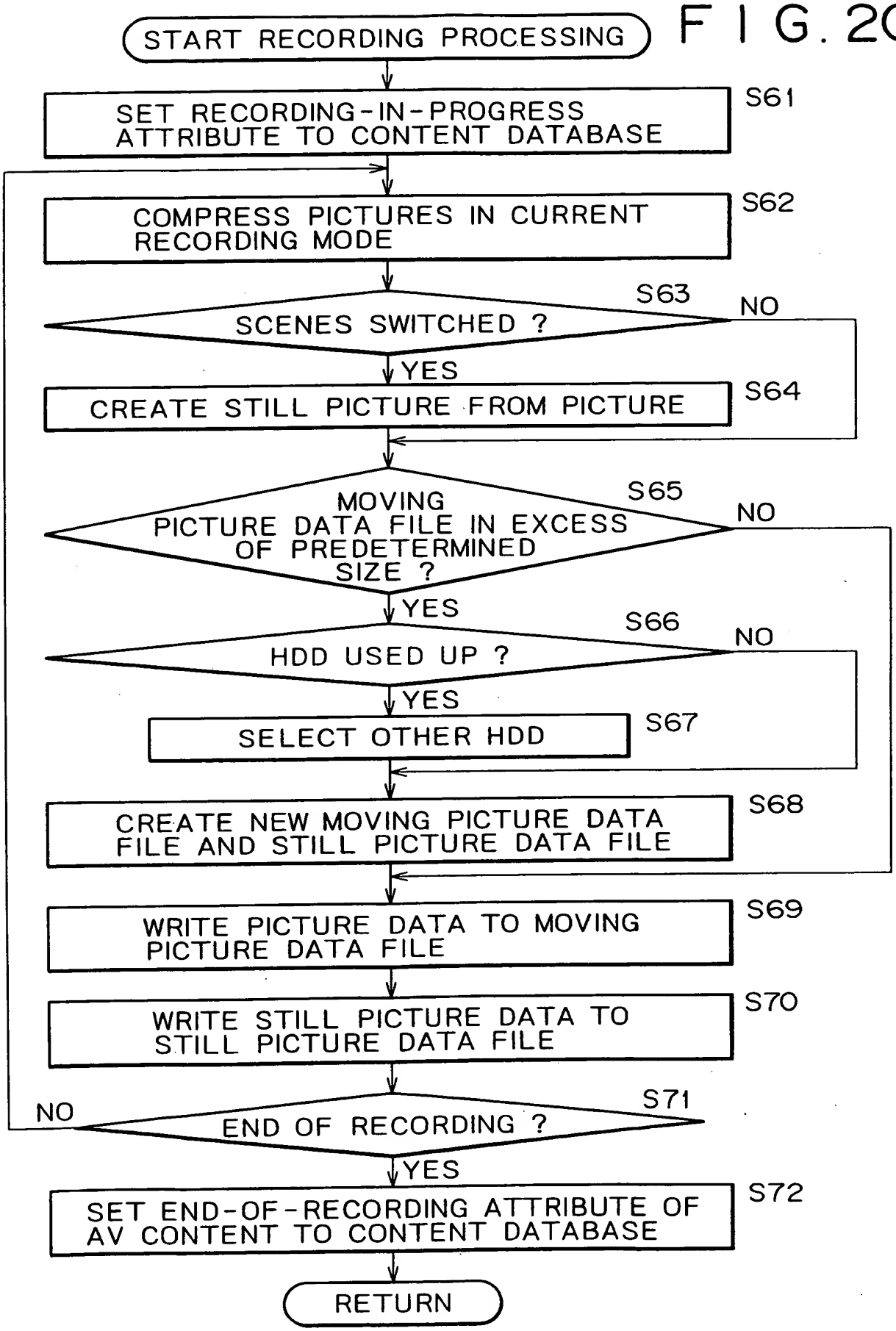
START RECORDING PROCESSING
SET RECORDING-IN-PROGRESS ATTRIBUTE TO CONTENT DATABASE
S61
COMPRESS PICTURES IN CURRENT RECORDING MODE
S62
SCENES SWITCHED ?
S63
NO
YES
CREATE STILL PICTURE FROM PICTURE
S64
MOVING PICTURE DATA FILE IN EXCESS OF PREDETERMINED SIZE ?
S65
NO
YES
HDD USED UP ?
S66
NO
YES
SELECT OTHER HDD
S67
CREATE NEW MOVING PICTURE DATA FILE AND STILL PICTURE DATA FILE
S68
WRITE PICTURE DATA TO MOVING PICTURE DATA FILE
S69
WRITE STILL PICTURE DATA TO STILL PICTURE DATA FILE
S70
END OF RECORDING ?
S71
NO
YES
SET END-OF-RECORDING ATTRIBUTE OF AV CONTENT TO CONTENT DATABASE
S72
RETURN

FIG. 21

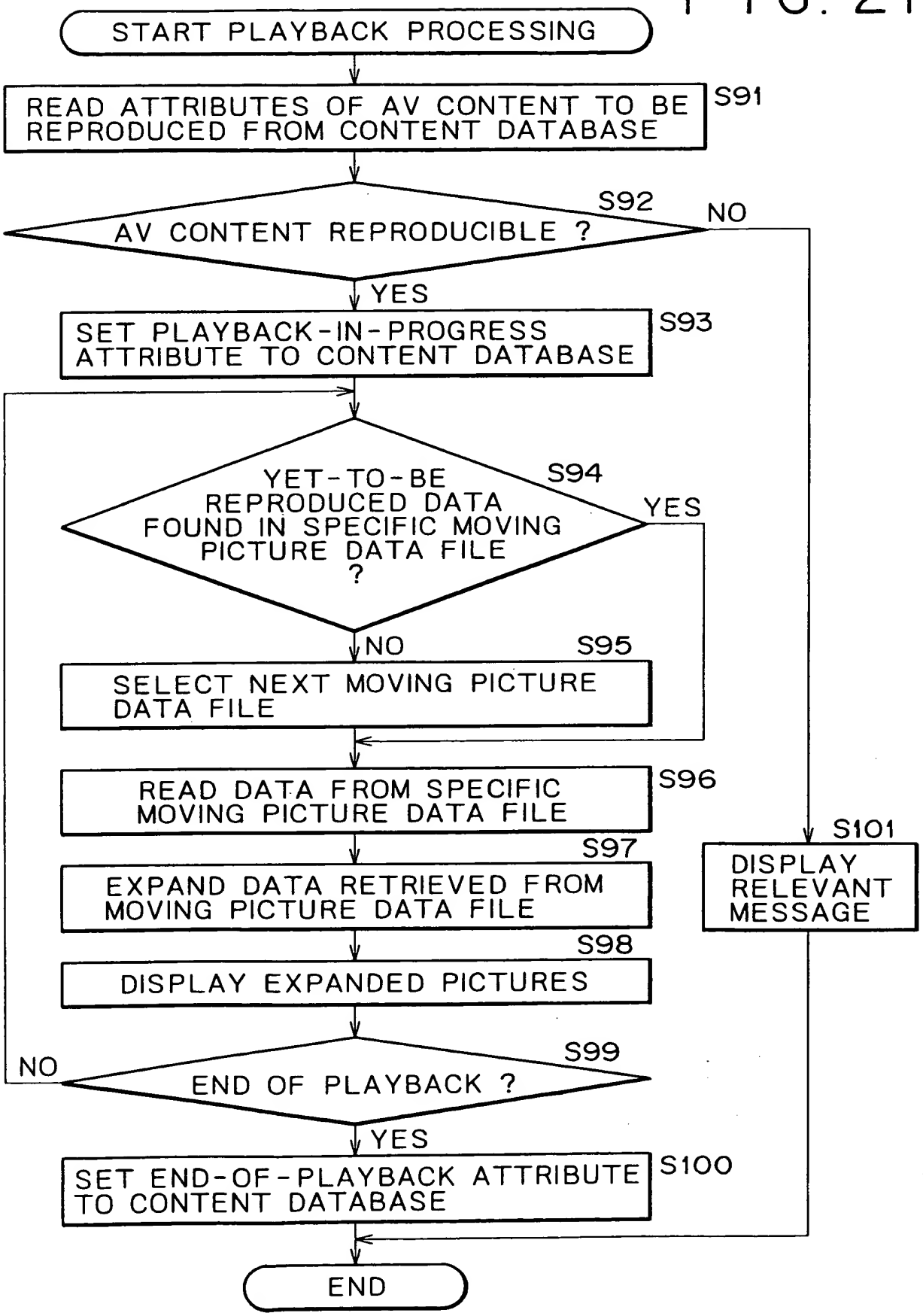
START PLAYBACK PROCESSING
READ ATTRIBUTES OF AV CONTENT TO BE REPRODUCED FROM CONTENT DATABASE
S91
AV CONTENT REPRODUCIBLE ?
S92
NO
YES
SET PLAYBACK-IN-PROGRESS ATTRIBUTE TO CONTENT DATABASE
S93
YET-TO-BE REPRODUCED DATA FOUND IN SPECIFIC MOVING PICTURE DATA FILE ?
S94
YES
NO
SELECT NEXT MOVING PICTURE DATA FILE
S95
READ DATA FROM SPECIFIC MOVING PICTURE DATA FILE
S96
EXPAND DATA RETRIEVED FROM MOVING PICTURE DATA FILE
S97
DISPLAY EXPANDED PICTURES
S98
END OF PLAYBACK ?
S99
NO
YES
SET END-OF-PLAYBACK ATTRIBUTE TO CONTENT DATABASE
S100
DISPLAY RELEVANT MESSAGE
S101
END

FIG. 22

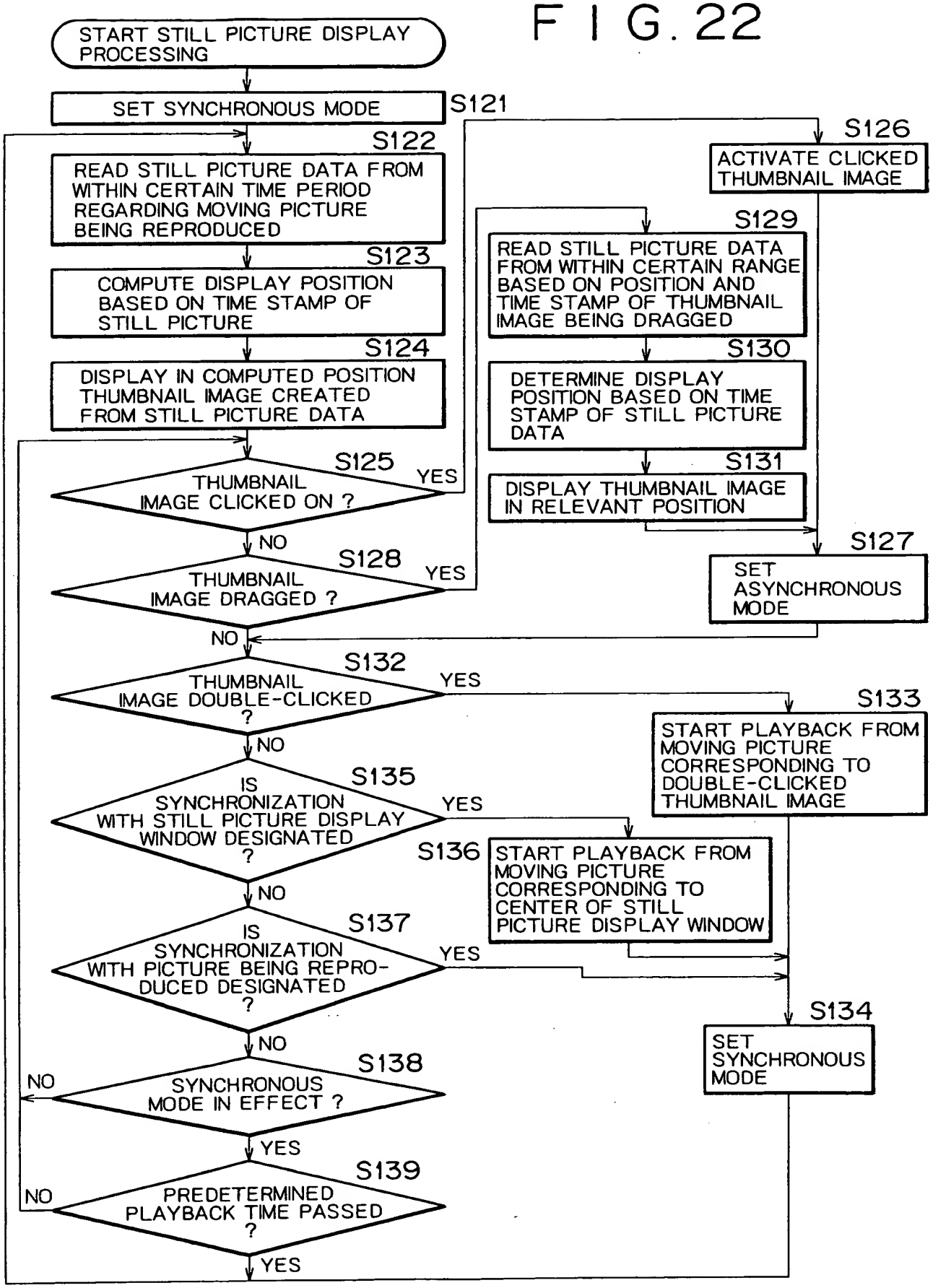
START STILL PICTURE DISPLAY PROCESSING
SET SYNCHRONOUS MODE
S121
S122
READ STILL PICTURE DATA FROM WITHIN CERTAIN TIME PERIOD REGARDING MOVING PICTURE BEING REPRODUCED
S123
COMPUTE DISPLAY POSITION BASED ON TIME STAMP OF STILL PICTURE
S124
DISPLAY IN COMPUTED POSITION THUMBNAIL IMAGE CREATED FROM STILL PICTURE DATA
S125
THUMBNAIL IMAGE CLICKED ON ?
YES
NO
S128
THUMBNAIL IMAGE DRAGGED ?
YES
NO
S126
ACTIVATE CLICKED THUMBNAIL IMAGE
S129
READ STILL PICTURE DATA FROM WITHIN CERTAIN RANGE BASED ON POSITION AND TIME STAMP OF THUMBNAIL IMAGE BEING DRAGGED
S130
DETERMINE DISPLAY POSITION BASED ON TIME STAMP OF STILL PICTURE DATA
S131
DISPLAY THUMBNAIL IMAGE IN RELEVANT POSITION
S127
SET ASYNCHRONOUS MODE
S132
THUMBNAIL IMAGE DOUBLE-CLICKED ?
YES
NO
S133
START PLAYBACK FROM MOVING PICTURE CORRESPONDING TO DOUBLE-CLICKED THUMBNAIL IMAGE
S135
IS SYNCHRONIZATION WITH STILL PICTURE DISPLAY WINDOW DESIGNATED ?
YES
NO
S136
START PLAYBACK FROM MOVING PICTURE CORRESPONDING TO CENTER OF STILL PICTURE DISPLAY WINDOW
S137
IS SYNCHRONIZATION WITH PICTURE BEING REPRODUCED DESIGNATED ?
YES
NO
S134
SET SYNCHRONOUS MODE
S138
SYNCHRONOUS MODE IN EFFECT ?
NO
YES
S139
PREDETERMINED PLAYBACK TIME PASSED ?
NO
YES

FIG. 23

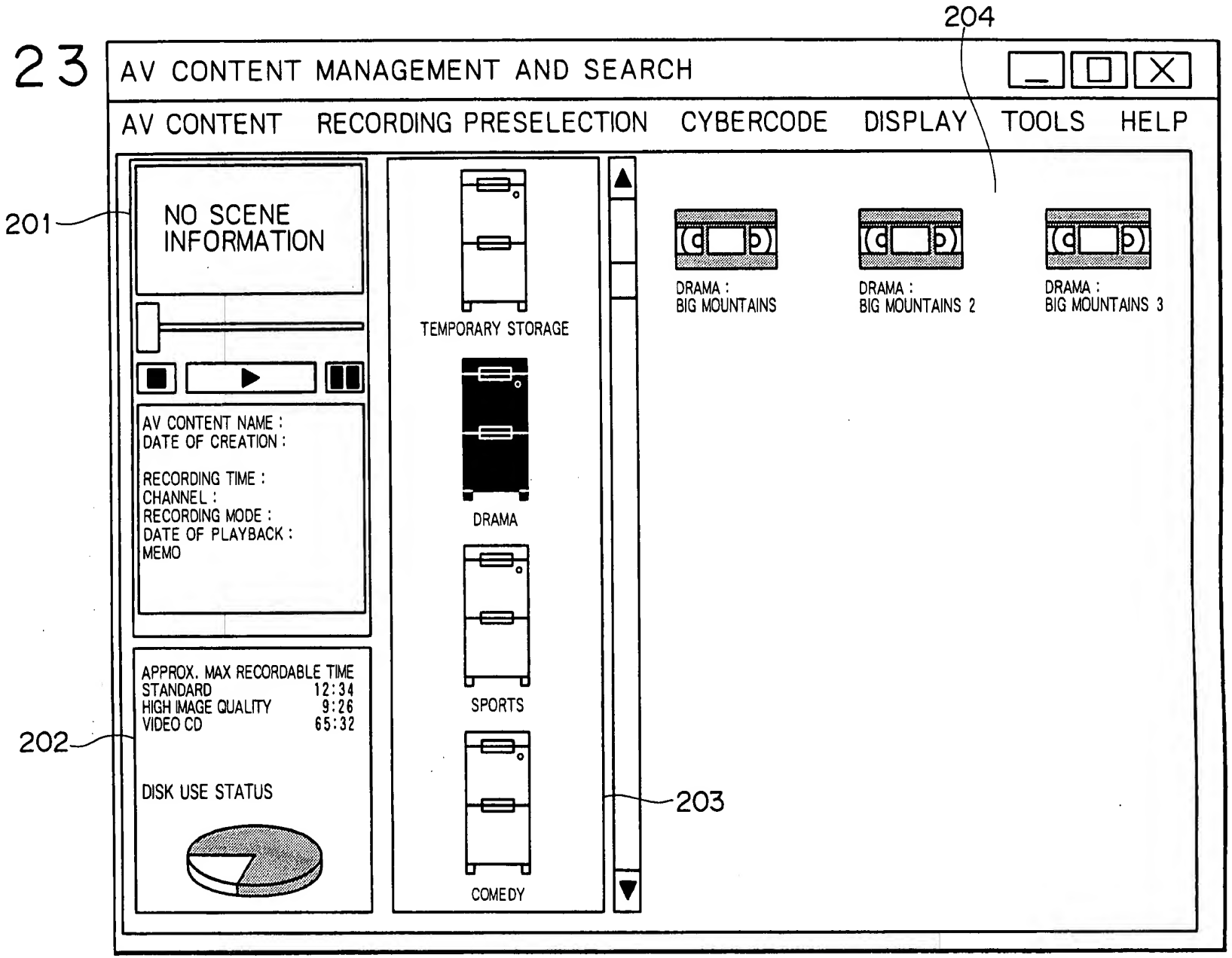
204
AV CONTENT MANAGEMENT AND SEARCH
AV CONTENT
RECORDING PRESELECTION
CYBERCODE
DISPLAY
TOOLS
HELP
201
NO SCENE INFORMATION
AV CONTENT NAME :
DATE OF CREATION :
RECORDING TIME :
CHANNEL :
RECORDING MODE :
DATE OF PLAYBACK :
MEMO
APPROX. MAX RECORDABLE TIME
STANDARD 12:34
HIGH IMAGE QUALITY 9:26
VIDEO CD 65:32
202
DISK USE STATUS
TEMPORARY STORAGE
DRAMA
SPORTS
COMEDY
203
DRAMA : BIG MOUNTAINS
DRAMA : BIG MOUNTAINS 2
DRAMA : BIG MOUNTAINS 3

FIG. 24

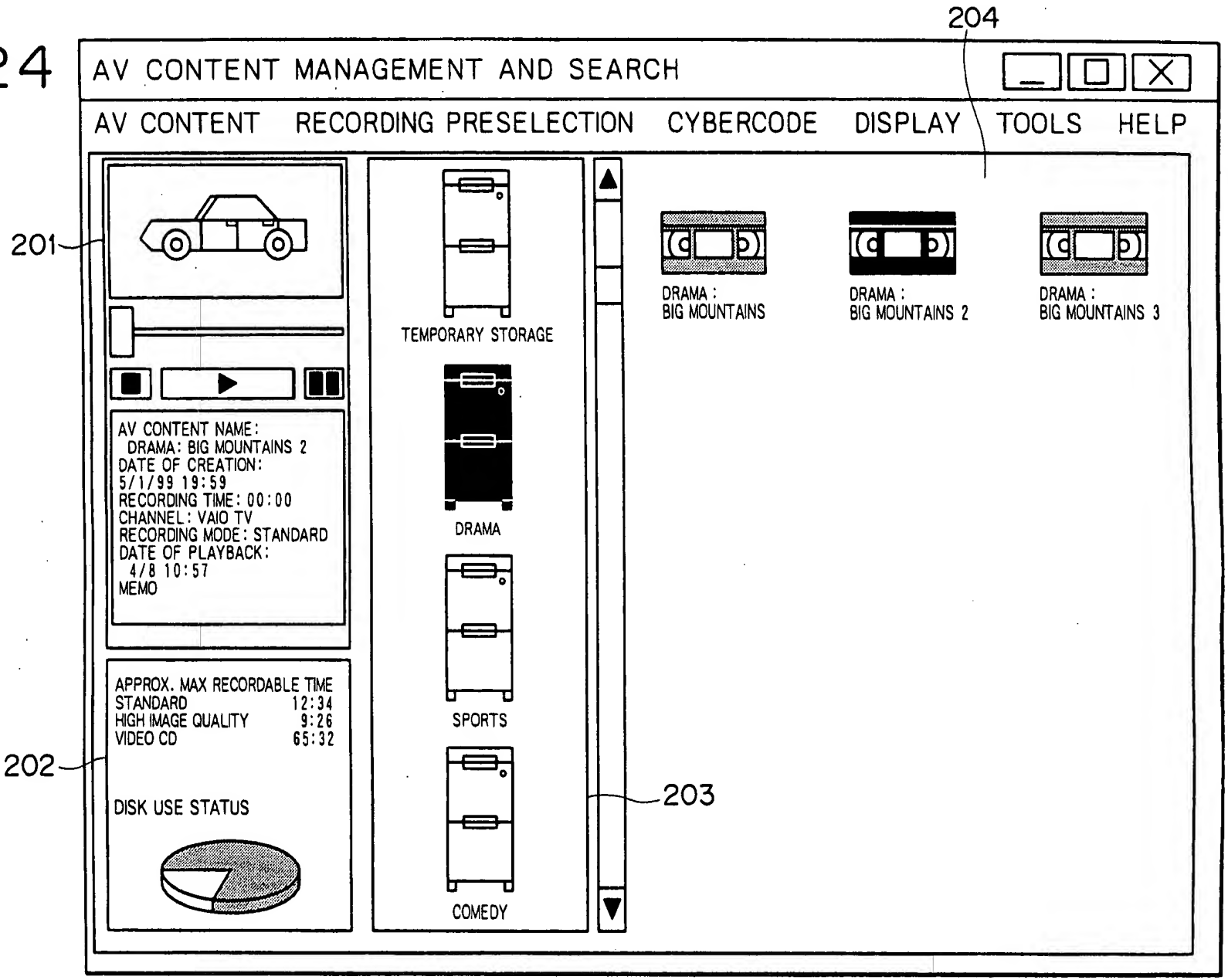
204
AV CONTENT MANAGEMENT AND SEARCH
AV CONTENT
RECORDING PRESELECTION
CYBERCODE
DISPLAY
TOOLS
HELP
201
AV CONTENT NAME:
DRAMA: BIG MOUNTAINS 2
DATE OF CREATION:
5/1/99 19:59
RECORDING TIME: 00:00
CHANNEL: VAIO TV
RECORDING MODE: STANDARD
DATE OF PLAYBACK:
4/8 10:57
MEMO
202
APPROX. MAX RECORDABLE TIME
STANDARD 12:34
HIGH IMAGE QUALITY 9:26
VIDEO CD 65:32
DISK USE STATUS
TEMPORARY STORAGE
DRAMA
SPORTS
COMEDY
203
DRAMA :
BIG MOUNTAINS
DRAMA :
BIG MOUNTAINS 2
DRAMA :
BIG MOUNTAINS 3

FIG.25A

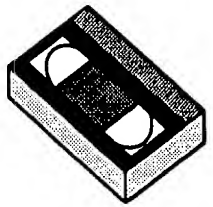

FIG.25B

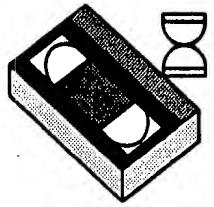

FIG.25C

FIG.25D

FIG.25E

FIG.25F

FIG.25G

FIG.25H

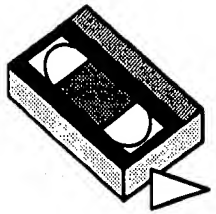

FIG.25I

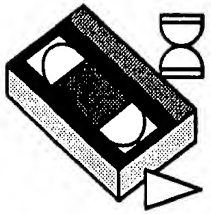

FIG.25J

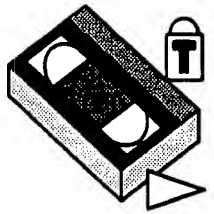

FIG.25K

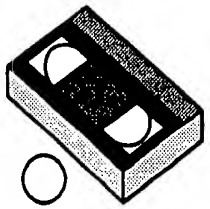

FIG.25L

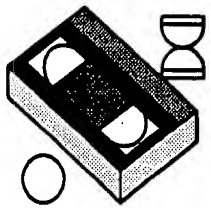

FIG.25M

FIG.26A

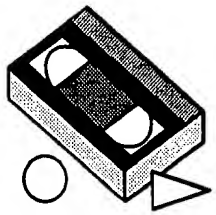

FIG.26B

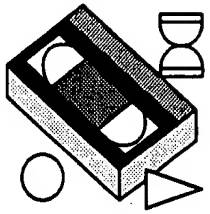

FIG.26C

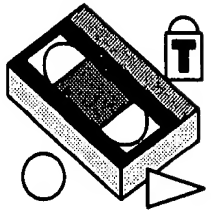

FIG.26D

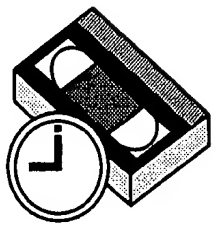

FIG.26E

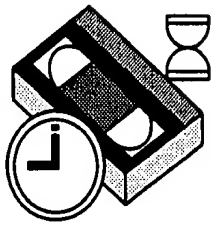

FIG.26F

FIG.26G

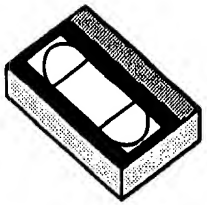

FIG.26H

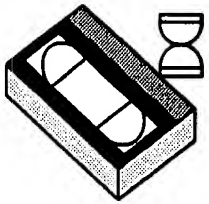

FIG.26I

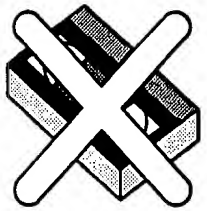

FIG.26J

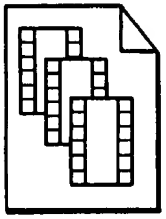

FIG.26K

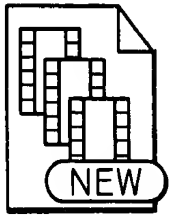

FIG.26L

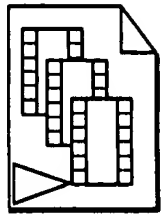

FIG.26M

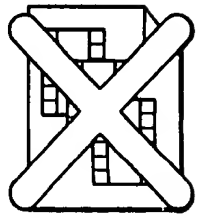

FIG. 27

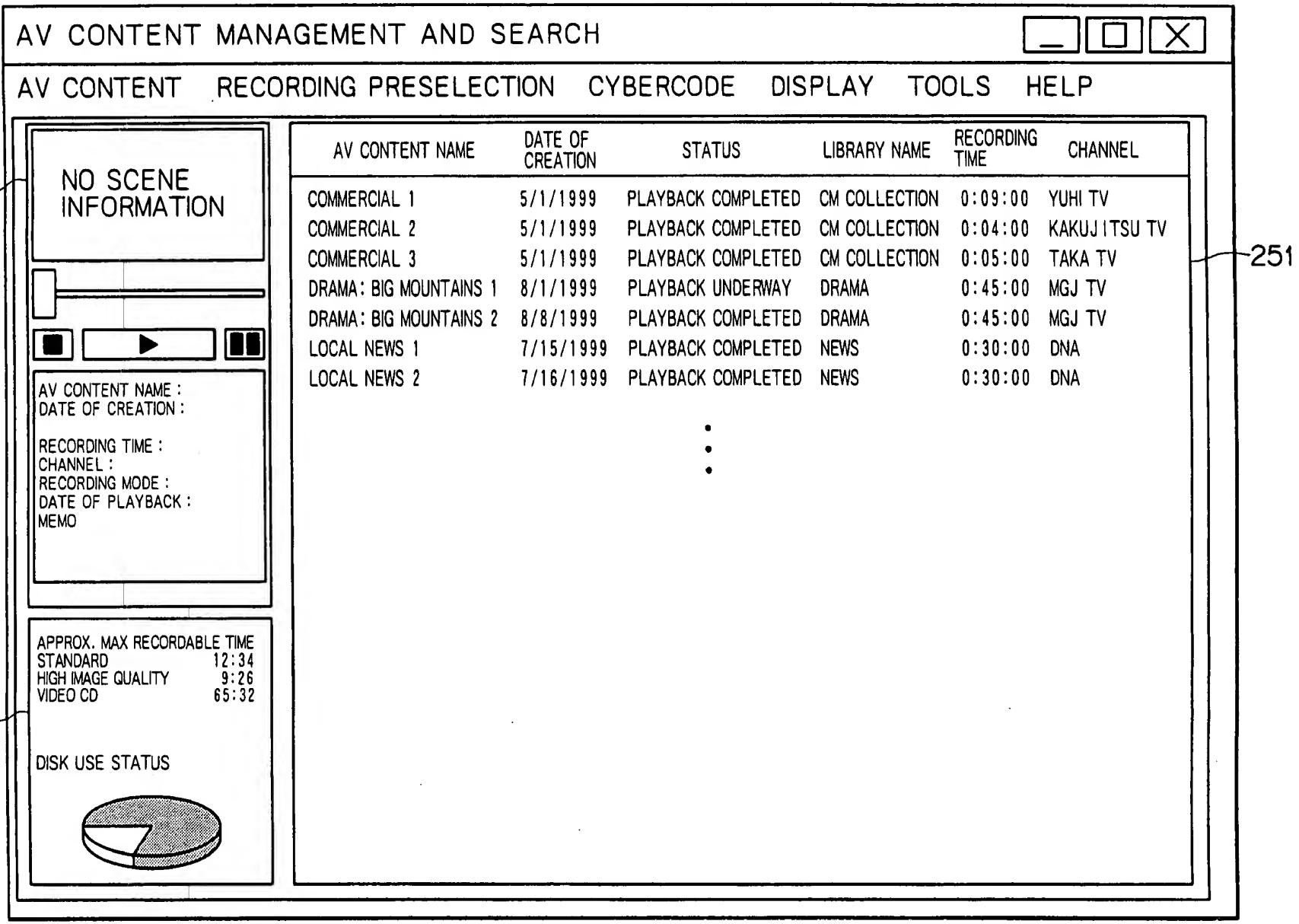
AV CONTENT MANAGEMENT AND SEARCH
AV CONTENT
RECORDING PRESELECTION
CYBERCODE
DISPLAY
TOOLS
HELP
201
NO SCENE INFORMATION
AV CONTENT NAME :
DATE OF CREATION :
RECORDING TIME :
CHANNEL :
RECORDING MODE :
DATE OF PLAYBACK :
MEMO
202
APPROX. MAX RECORDABLE TIME
STANDARD 12:34
HIGH IMAGE QUALITY 9:26
VIDEO CD 65:32
DISK USE STATUS
AV CONTENT NAME
DATE OF CREATION
STATUS
LIBRARY NAME
RECORDING TIME
CHANNEL
COMMERCIAL 1 5/1/1999 PLAYBACK COMPLETED CM COLLECTION 0:09:00 YUHI TV
COMMERCIAL 2 5/1/1999 PLAYBACK COMPLETED CM COLLECTION 0:04:00 KAKUJITSU TV
COMMERCIAL 3 5/1/1999 PLAYBACK COMPLETED CM COLLECTION 0:05:00 TAKA TV
DRAMA: BIG MOUNTAINS 1 8/1/1999 PLAYBACK UNDERWAY DRAMA 0:45:00 MGJ TV
DRAMA: BIG MOUNTAINS 2 8/8/1999 PLAYBACK COMPLETED DRAMA 0:45:00 MGJ TV
LOCAL NEWS 1 7/15/1999 PLAYBACK COMPLETED NEWS 0:30:00 DNA
LOCAL NEWS 2 7/16/1999 PLAYBACK COMPLETED NEWS 0:30:00 DNA
251

FIG. 28

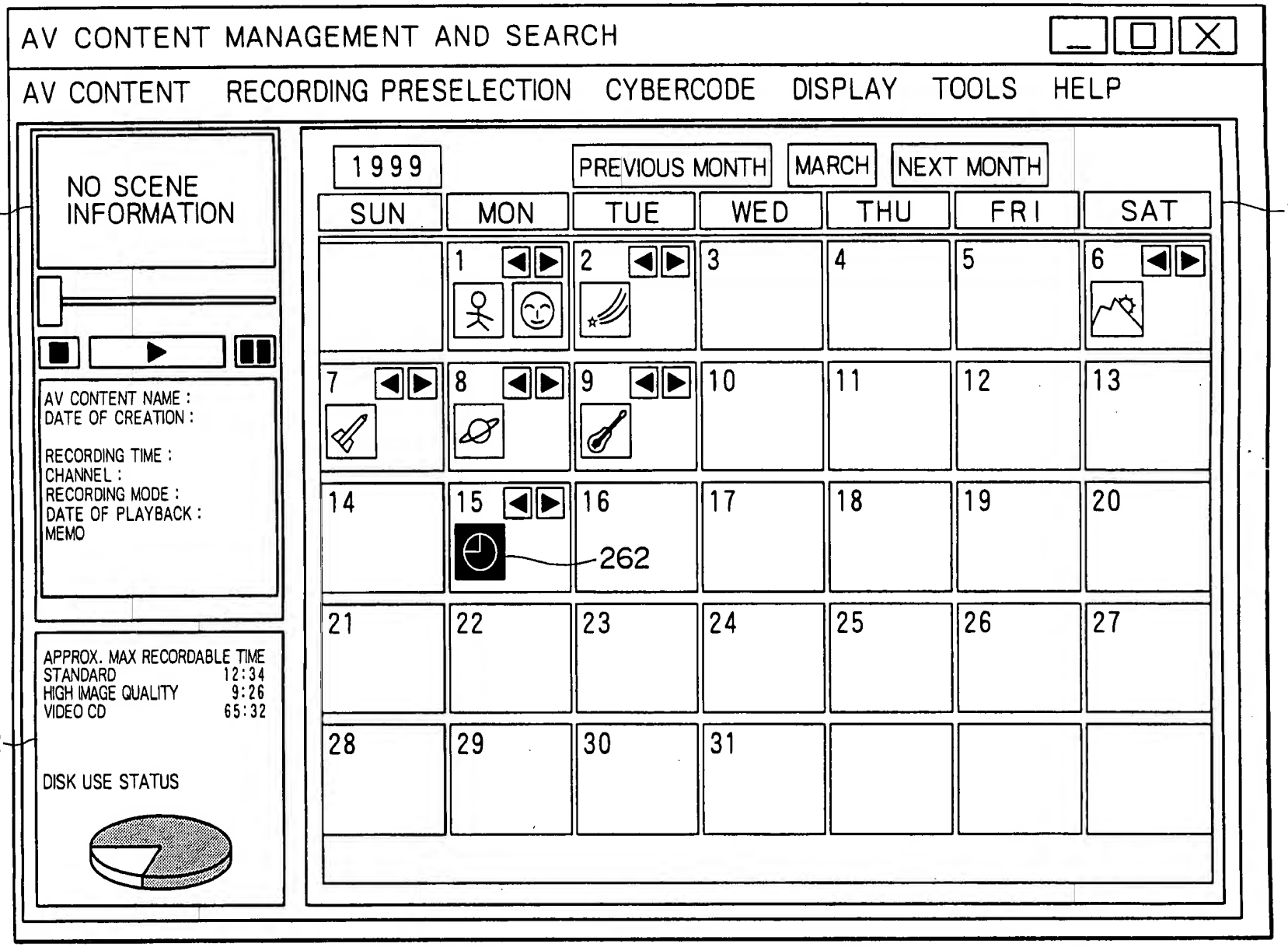

FIG. 29

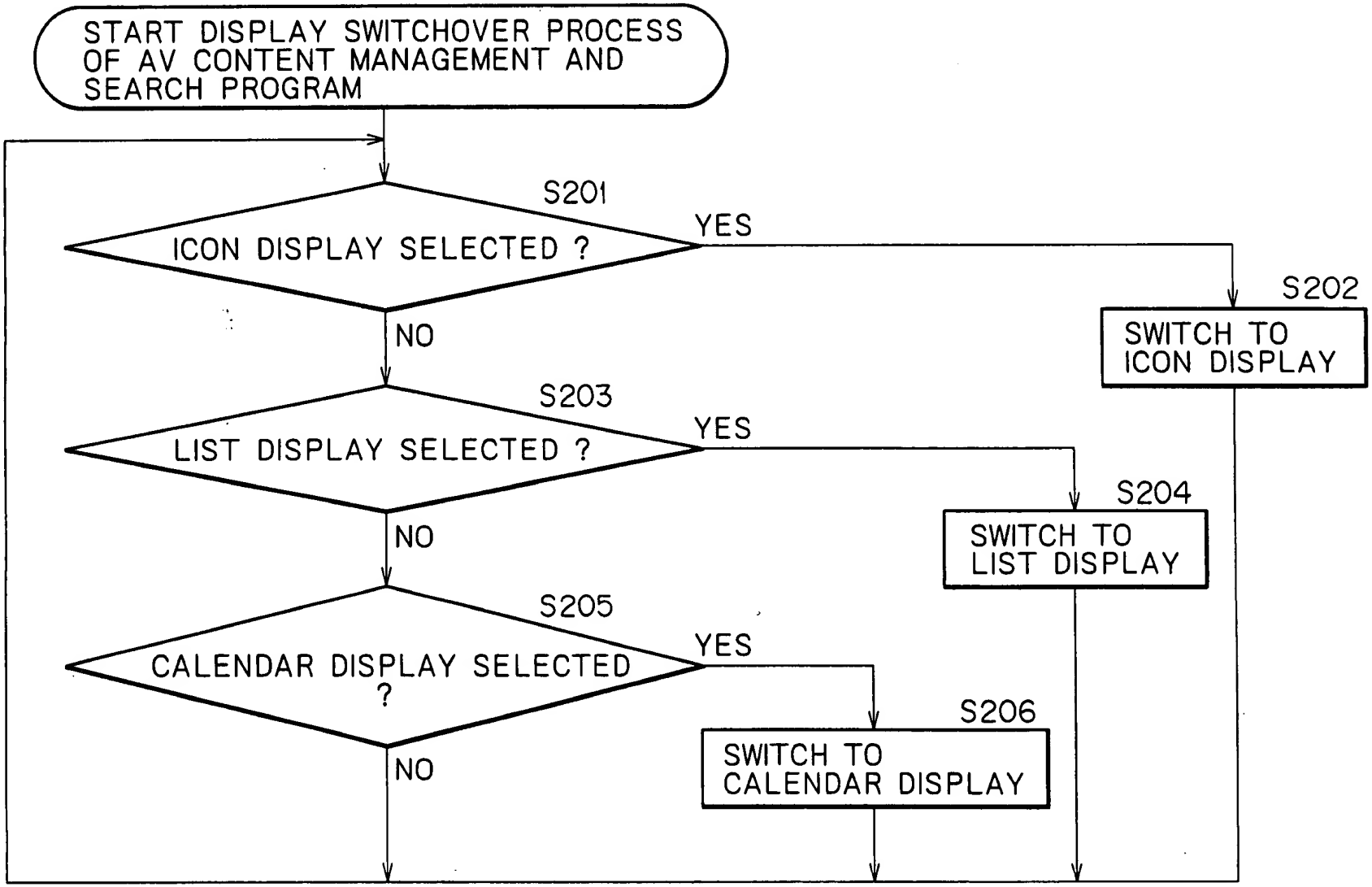
START DISPLAY SWITCHOVER PROCESS OF AV CONTENT MANAGEMENT AND SEARCH PROGRAM
S201
ICON DISPLAY SELECTED ?
YES
NO
S202
SWITCH TO ICON DISPLAY
S203
LIST DISPLAY SELECTED ?
YES
NO
S204
SWITCH TO LIST DISPLAY
S205
CALENDAR DISPLAY SELECTED ?
YES
NO
S206
SWITCH TO CALENDAR DISPLAY

FIG. 30

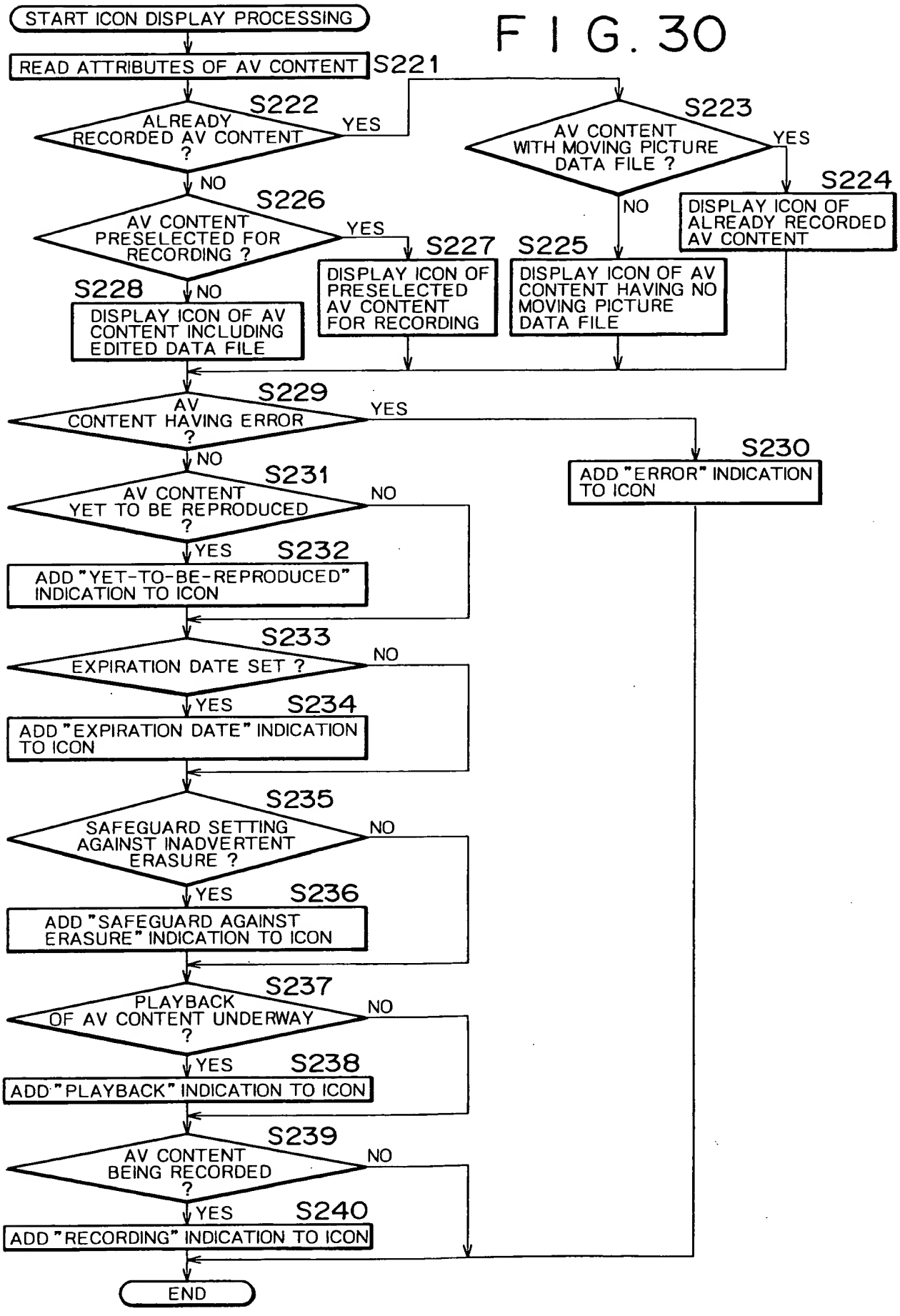
START ICON DISPLAY PROCESSING
READ ATTRIBUTES OF AV CONTENT
S221
S222
ALREADY RECORDED AV CONTENT ?
YES
NO
S223
AV CONTENT WITH MOVING PICTURE DATA FILE ?
YES
NO
S224
DISPLAY ICON OF ALREADY RECORDED AV CONTENT
S226
AV CONTENT PRESELECTED FOR RECORDING ?
YES
NO
S227
DISPLAY ICON OF PRESELECTED AV CONTENT FOR RECORDING
S225
DISPLAY ICON OF AV CONTENT HAVING NO MOVING PICTURE DATA FILE
S228
DISPLAY ICON OF AV CONTENT INCLUDING EDITED DATA FILE
S229
AV CONTENT HAVING ERROR ?
YES
NO
S230
ADD "ERROR" INDICATION TO ICON
S231
AV CONTENT YET TO BE REPRODUCED ?
NO
YES
S232
ADD "YET-TO-BE-REPRODUCED" INDICATION TO ICON
S233
EXPIRATION DATE SET ?
NO
YES
S234
ADD "EXPIRATION DATE" INDICATION TO ICON
S235
SAFEGUARD SETTING AGAINST INADVERTENT ERASURE ?
NO
YES
S236
ADD "SAFEGUARD AGAINST ERASURE" INDICATION TO ICON
S237
PLAYBACK OF AV CONTENT UNDERWAY ?
NO
YES
S238
ADD "PLAYBACK" INDICATION TO ICON
S239
AV CONTENT BEING RECORDED ?
NO
YES
S240
ADD "RECORDING" INDICATION TO ICON
END

FIG. 31

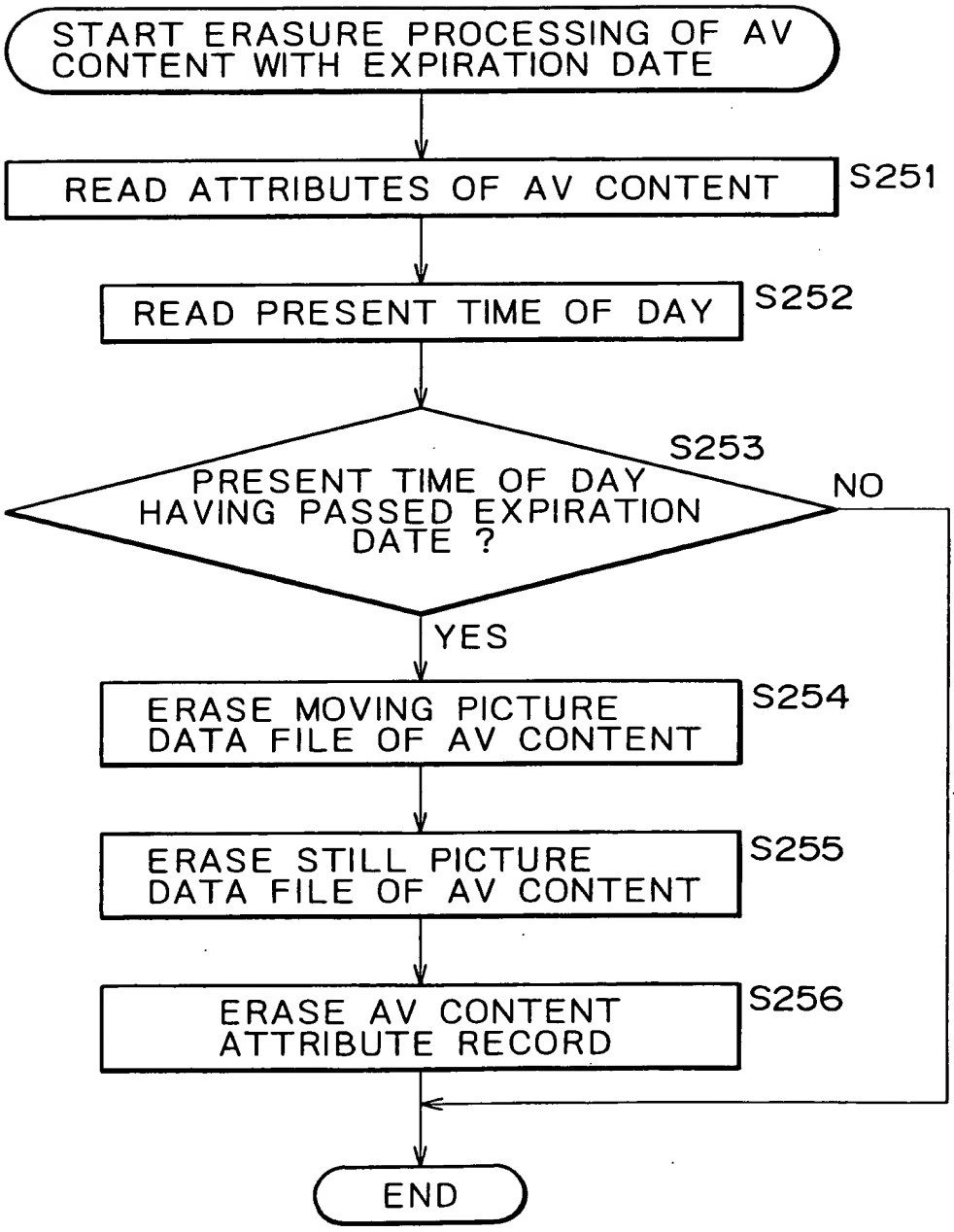
START ERASURE PROCESSING OF AV CONTENT WITH EXPIRATION DATE
READ ATTRIBUTES OF AV CONTENT
S251
READ PRESENT TIME OF DAY
S252
S253
PRESENT TIME OF DAY HAVING PASSED EXPIRATION DATE ?
NO
YES
ERASE MOVING PICTURE DATA FILE OF AV CONTENT
S254
ERASE STILL PICTURE DATA FILE OF AV CONTENT
S255
ERASE AV CONTENT ATTRIBUTE RECORD
S256
END

FIG. 32

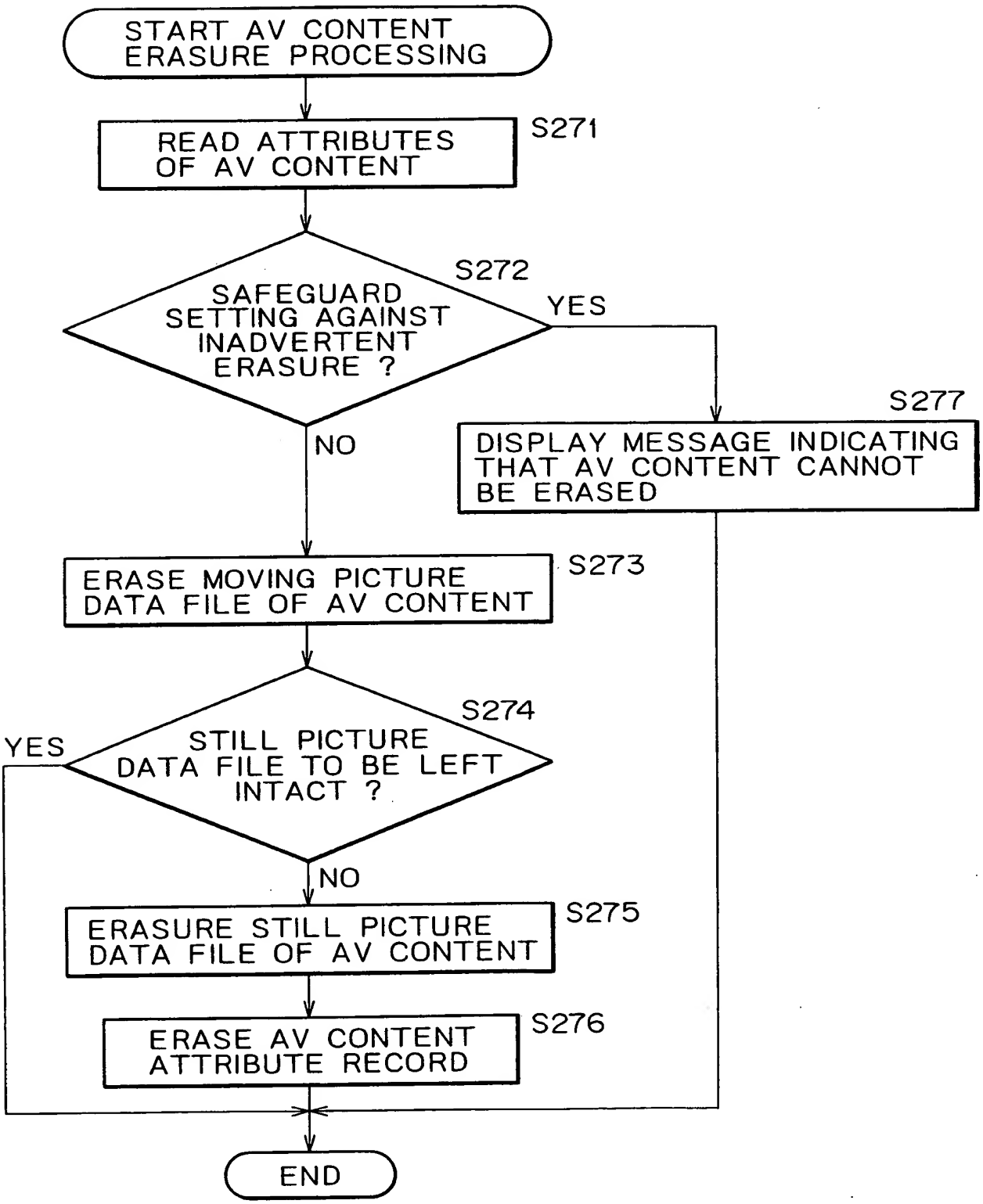
START AV CONTENT ERASURE PROCESSING
READ ATTRIBUTES OF AV CONTENT
S271
SAFEGUARD SETTING AGAINST INADVERTENT ERASURE ?
S272
YES
NO
DISPLAY MESSAGE INDICATING THAT AV CONTENT CANNOT BE ERASED
S277
ERASE MOVING PICTURE DATA FILE OF AV CONTENT
S273
STILL PICTURE DATA FILE TO BE LEFT INTACT ?
S274
YES
NO
ERASURE STILL PICTURE DATA FILE OF AV CONTENT
S275
ERASE AV CONTENT ATTRIBUTE RECORD
S276
END

FIG. 33

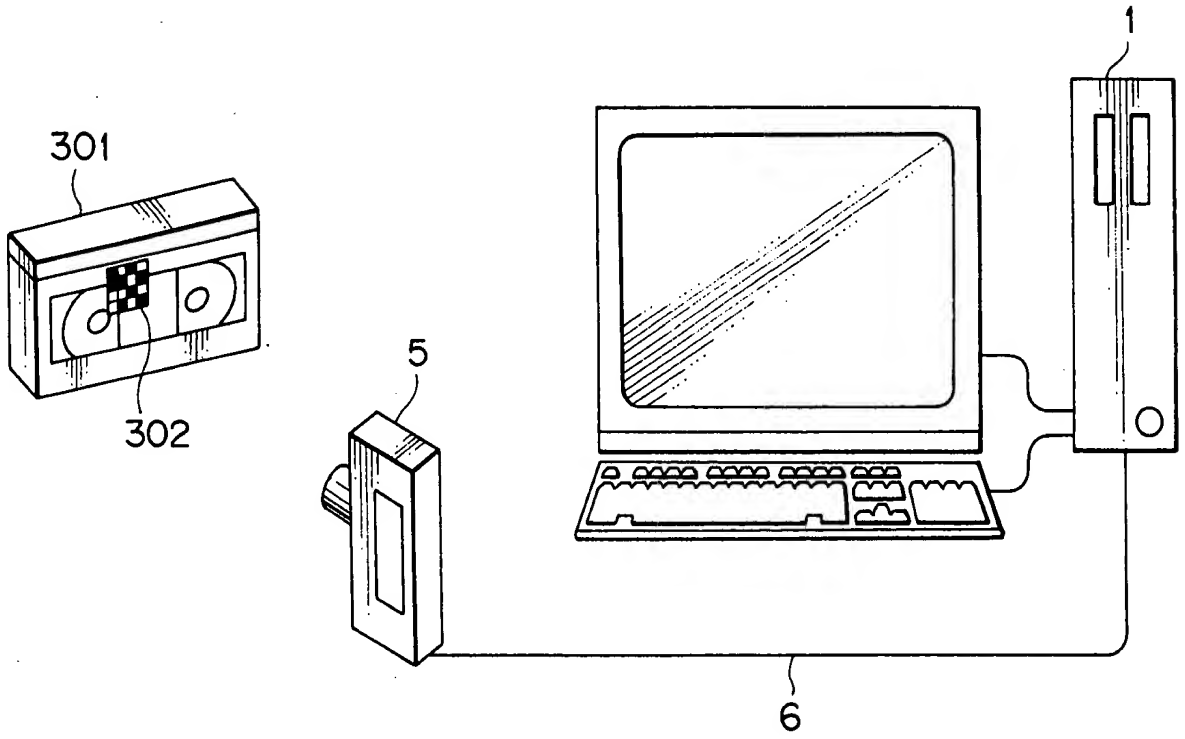

FIG. 34

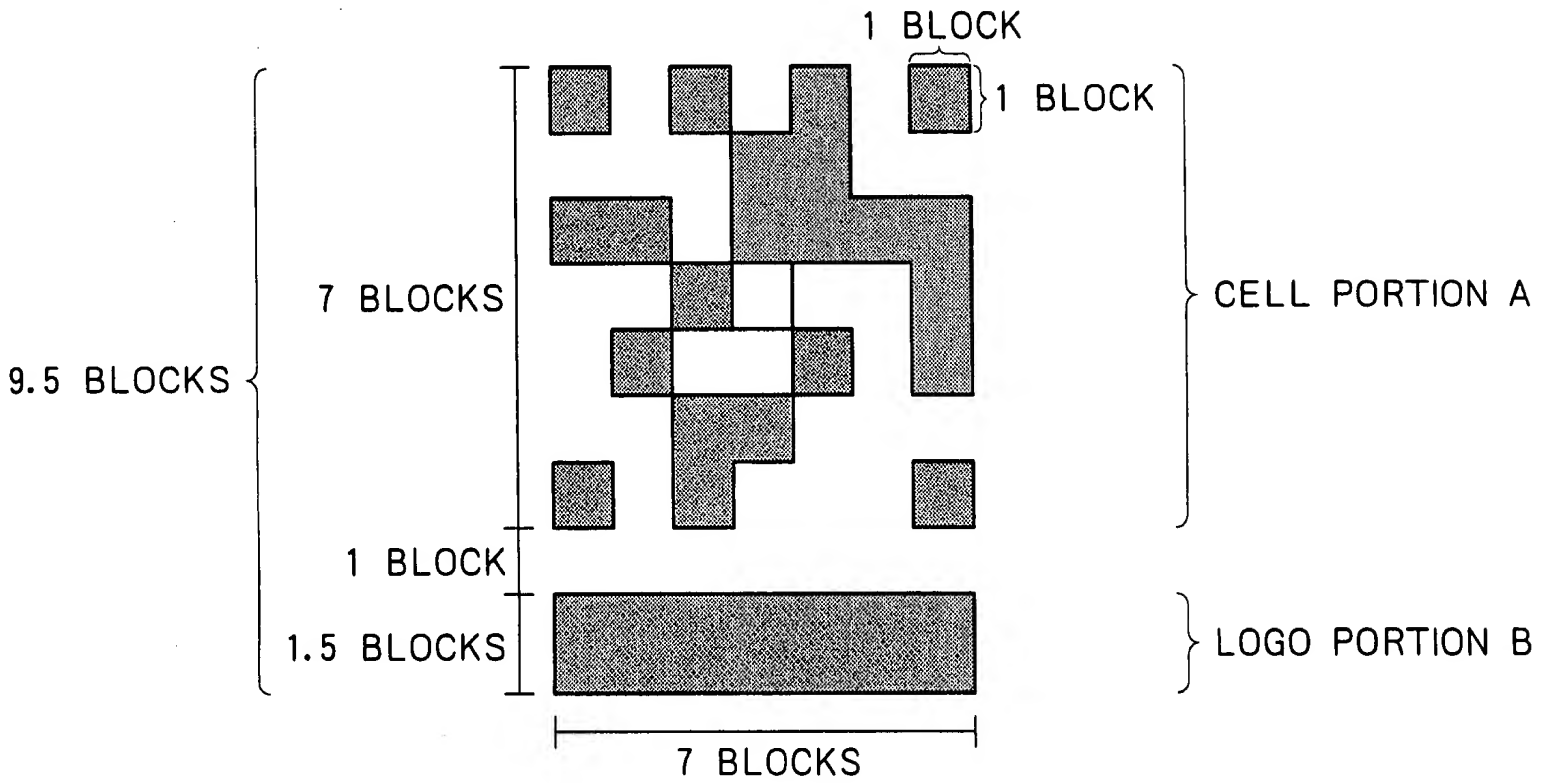
1 BLOCK
1 BLOCK
9.5 BLOCKS
7 BLOCKS
CELL PORTION A
1 BLOCK
1.5 BLOCKS
LOGO PORTION B
7 BLOCKS

FIG. 35

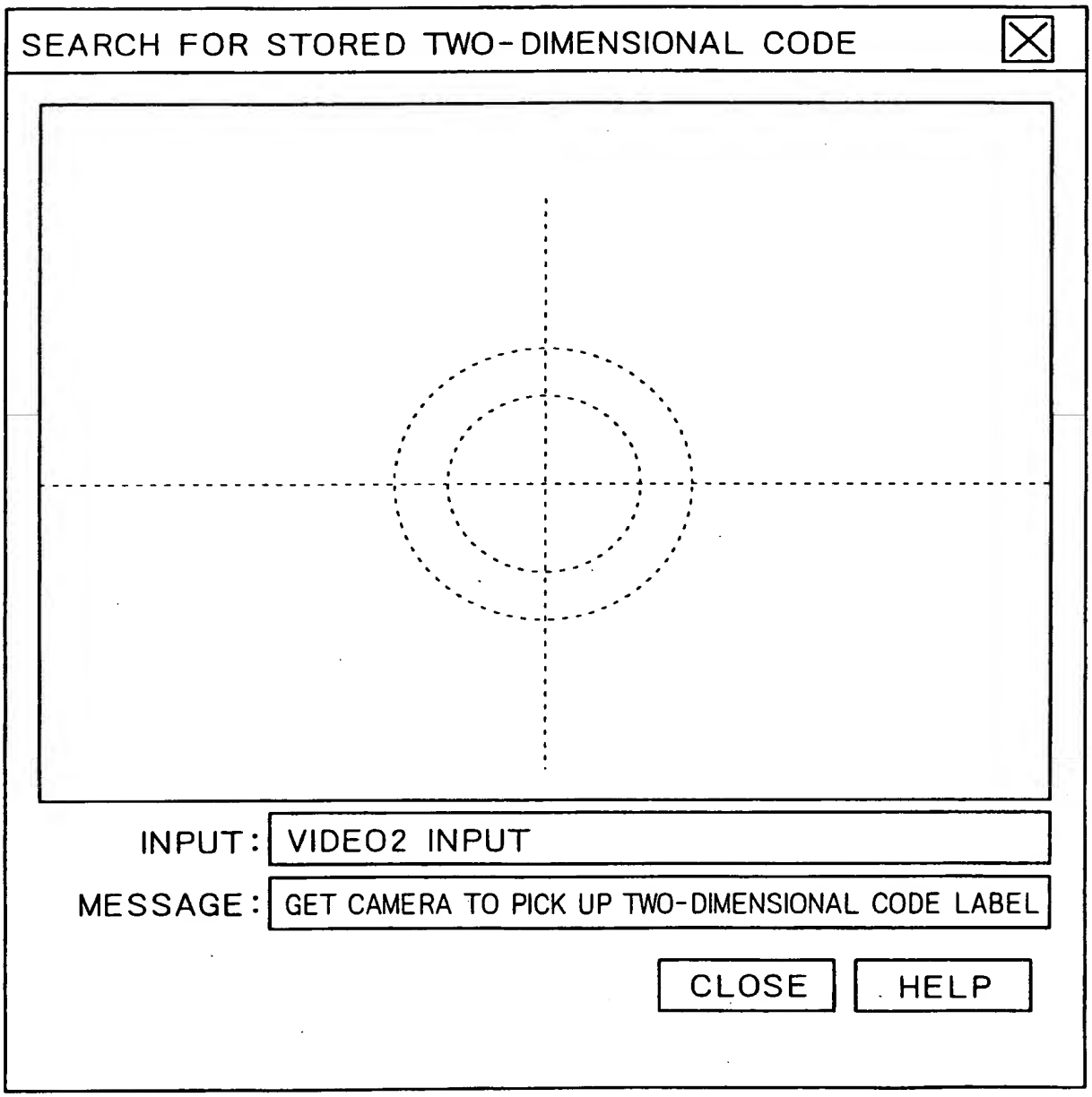
SEARCH FOR STORED TWO-DIMENSIONAL CODE
INPUT:
VIDEO2 INPUT
MESSAGE:
GET CAMERA TO PICK UP TWO-DIMENSIONAL CODE LABEL
CLOSE
HELP

FIG. 36

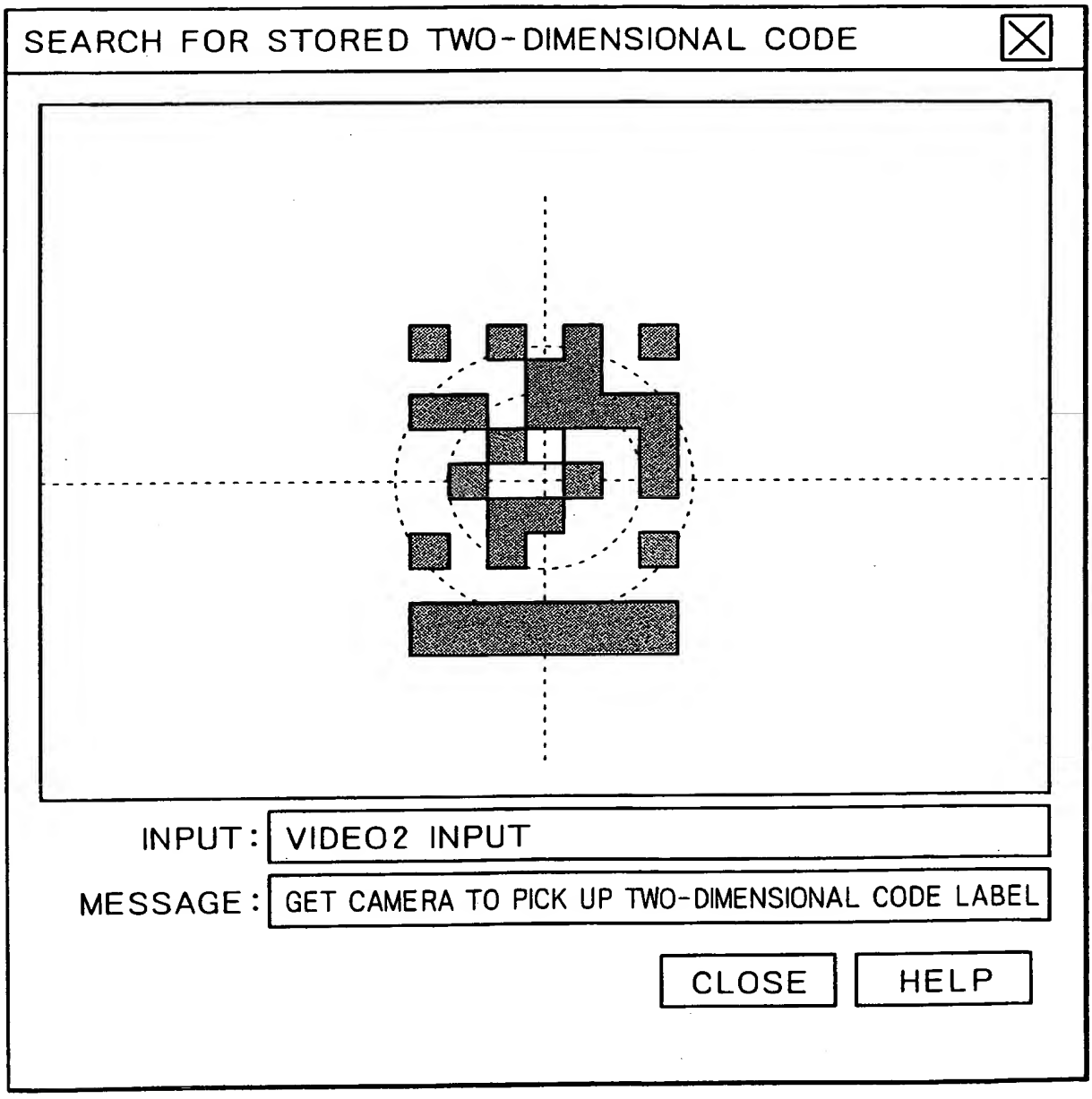
SEARCH FOR STORED TWO-DIMENSIONAL CODE
INPUT: VIDEO2 INPUT
MESSAGE: GET CAMERA TO PICK UP TWO-DIMENSIONAL CODE LABEL
CLOSE
HELP

FIG. 37

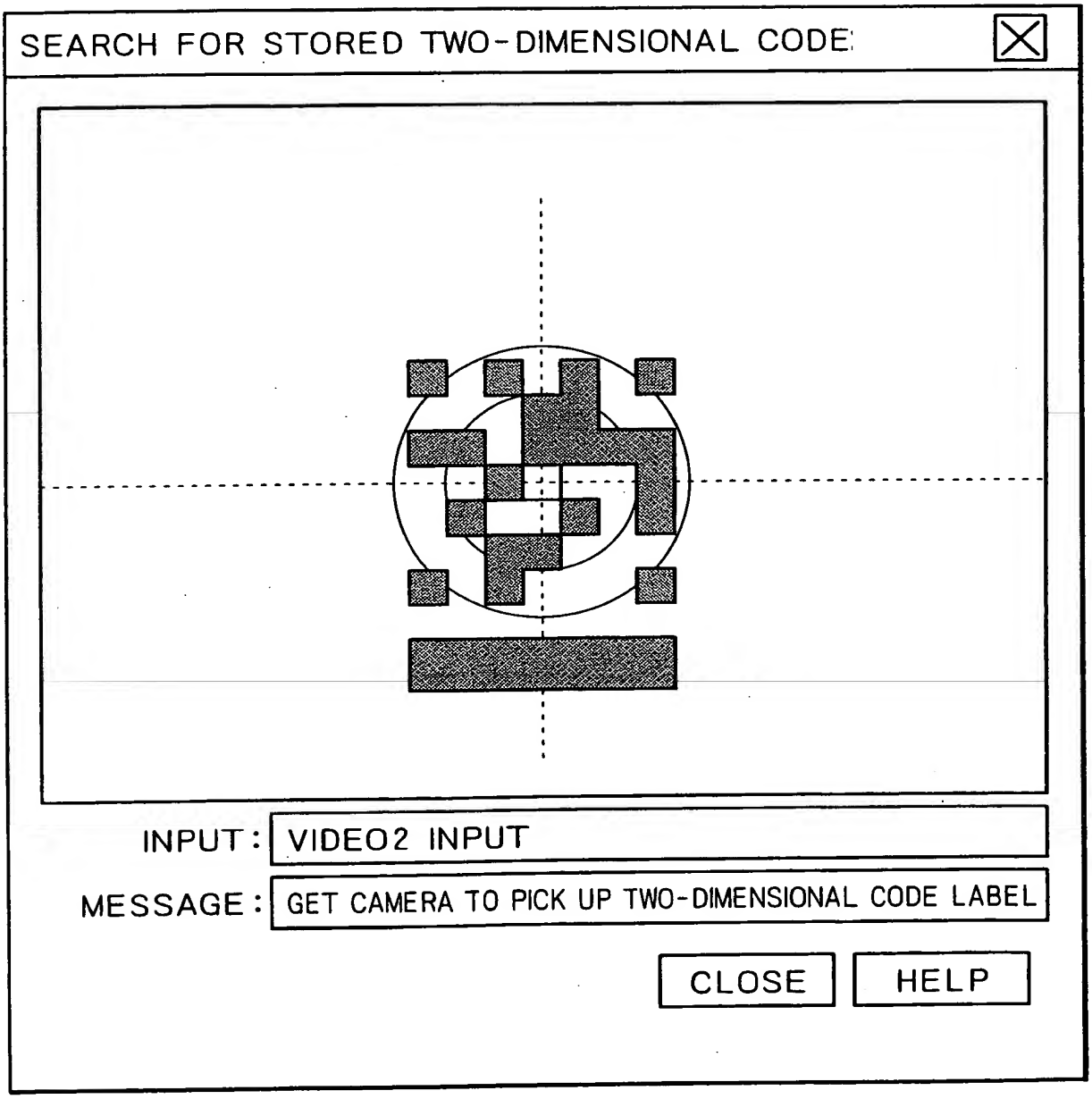
SEARCH FOR STORED TWO-DIMENSIONAL CODE
INPUT:
VIDEO2 INPUT
MESSAGE:
GET CAMERA TO PICK UP TWO-DIMENSIONAL CODE LABEL
CLOSE
HELP

FIG. 38

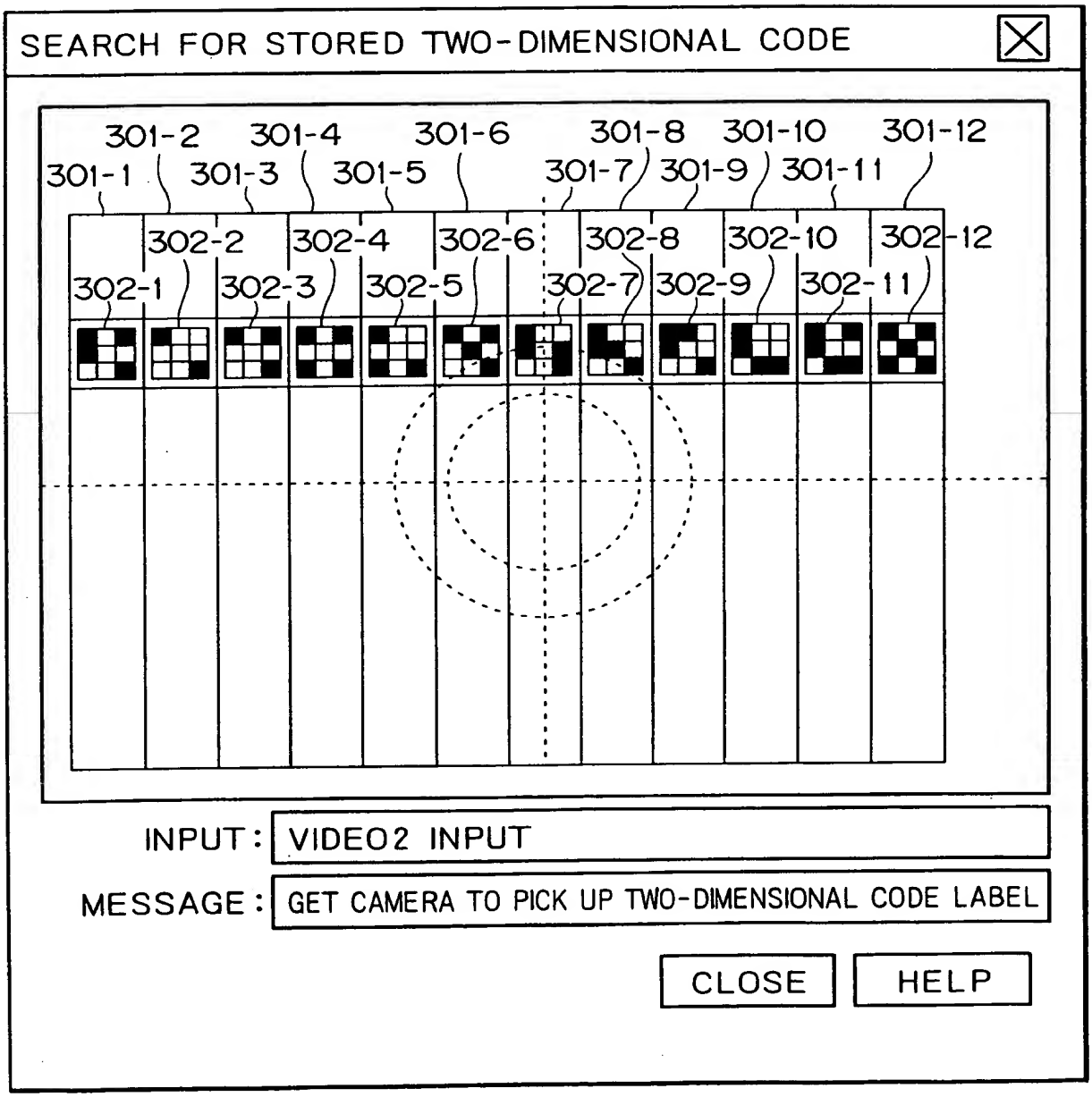
SEARCH FOR STORED TWO-DIMENSIONAL CODE
301-1
301-2
301-3
301-4
301-5
301-6
301-7
301-8
301-9
301-10
301-11
301-12
302-1
302-2
302-3
302-4
302-5
302-6
302-7
302-8
302-9
302-10
302-11
302-12
INPUT:
VIDEO2 INPUT
MESSAGE:
GET CAMERA TO PICK UP TWO-DIMENSIONAL CODE LABEL
CLOSE
HELP

FIG. 39

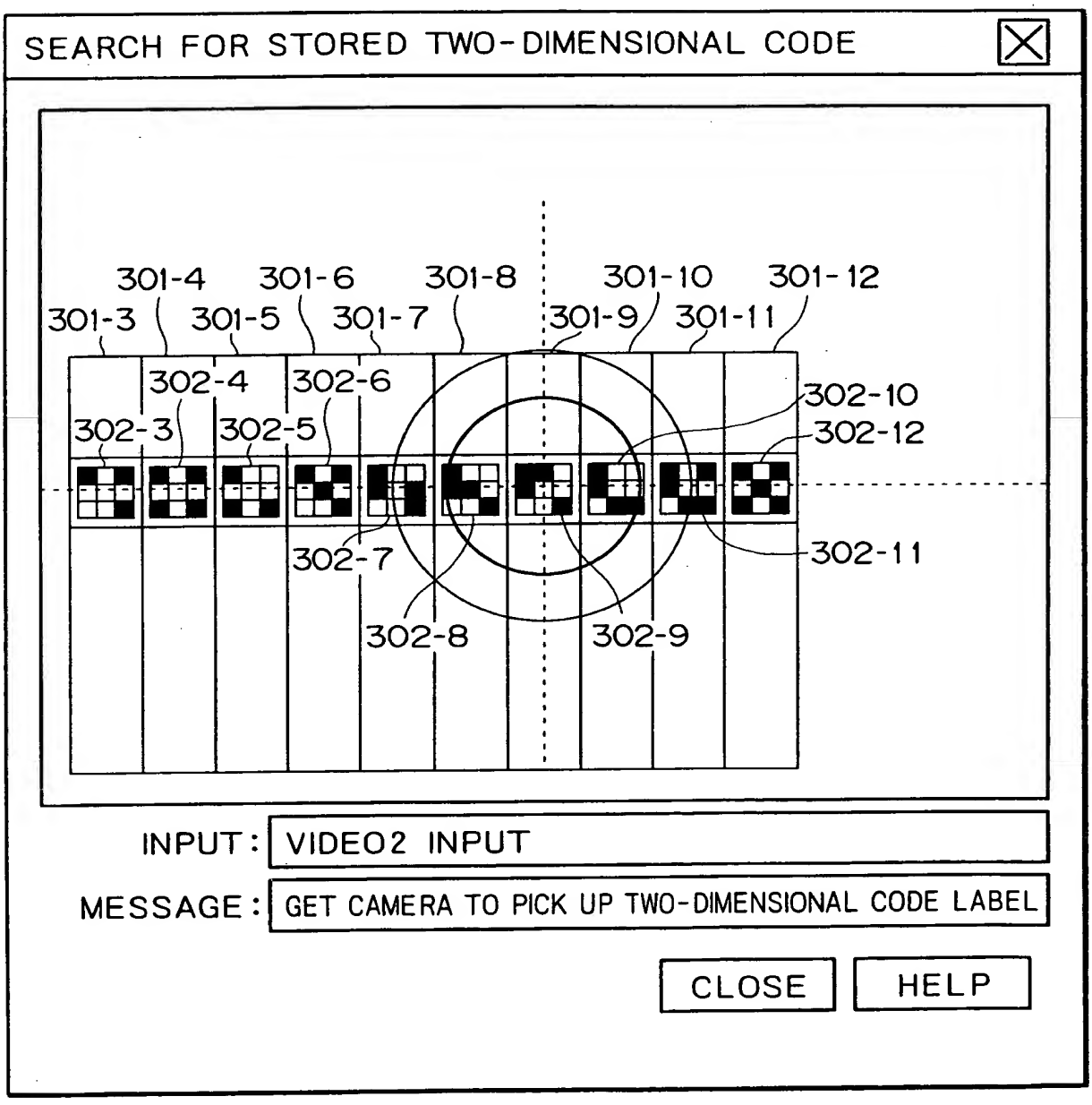
SEARCH FOR STORED TWO-DIMENSIONAL CODE
301-3
301-4
301-5
301-6
301-7
301-8
301-9
301-10
301-11
301-12
302-3
302-4
302-5
302-6
302-7
302-8
302-9
302-10
302-11
302-12
INPUT:
VIDEO2 INPUT
MESSAGE:
GET CAMERA TO PICK UP TWO-DIMENSIONAL CODE LABEL
CLOSE
HELP

FIG. 40

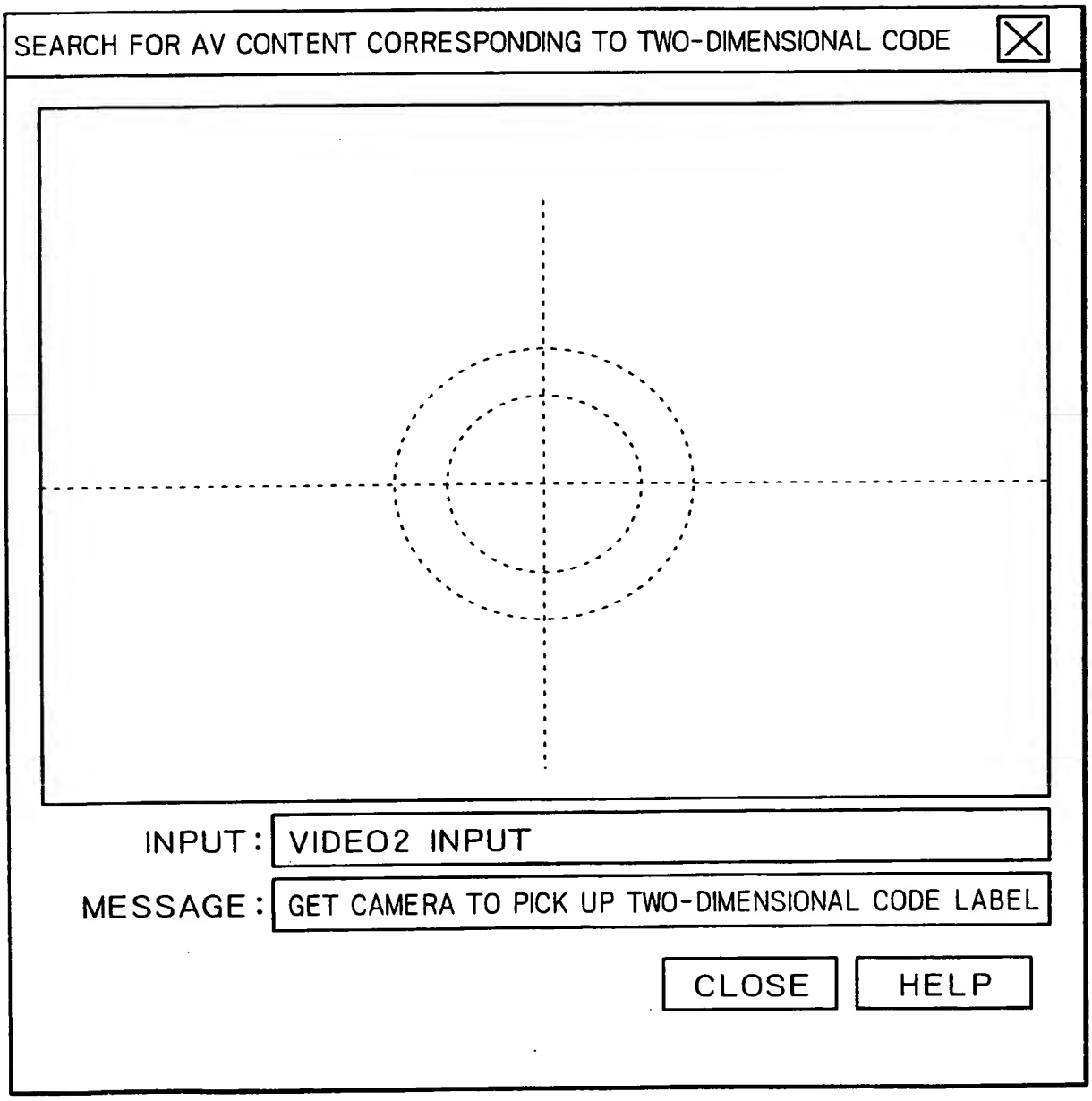
SEARCH FOR AV CONTENT CORRESPONDING TO TWO-DIMENSIONAL CODE
INPUT:
VIDEO2 INPUT
MESSAGE:
GET CAMERA TO PICK UP TWO-DIMENSIONAL CODE LABEL
CLOSE
HELP

FIG. 41

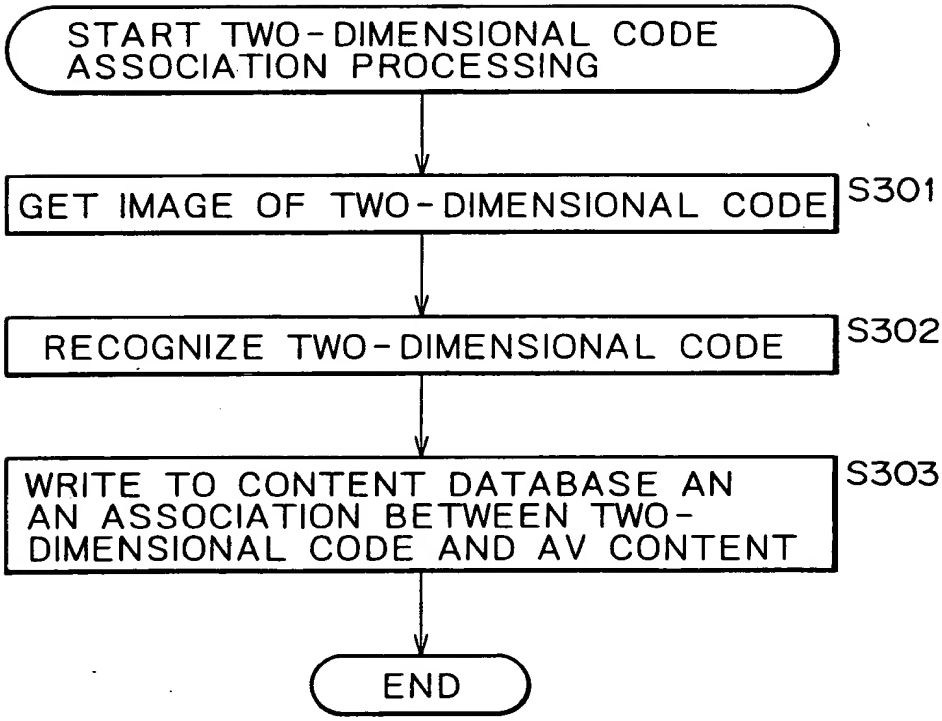
START TWO-DIMENSIONAL CODE ASSOCIATION PROCESSING
GET IMAGE OF TWO-DIMENSIONAL CODE
S301
RECOGNIZE TWO-DIMENSIONAL CODE
S302
WRITE TO CONTENT DATABASE AN AN ASSOCIATION BETWEEN TWO-DIMENSIONAL CODE AND AV CONTENT
S303
END

FIG. 42

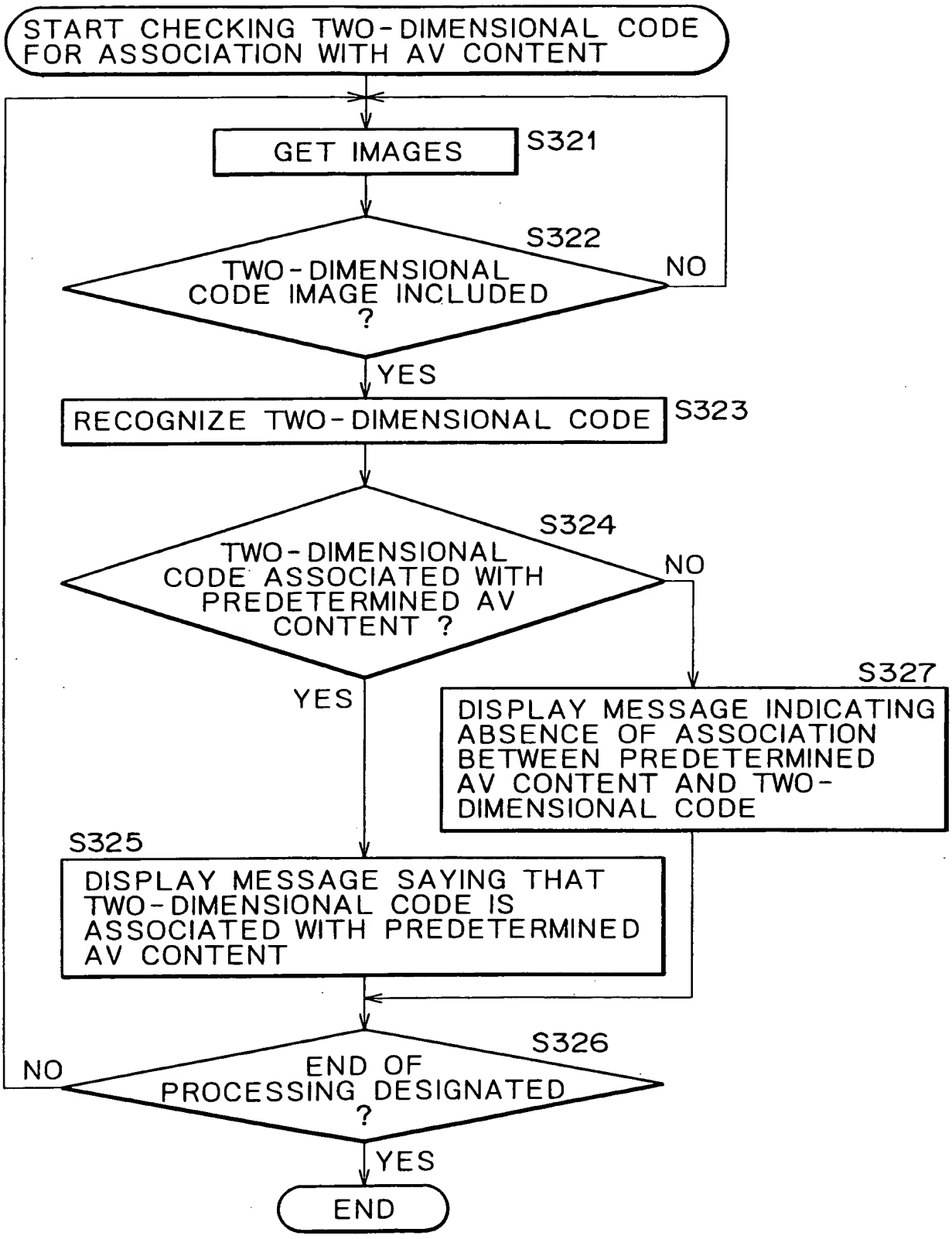
START CHECKING TWO-DIMENSIONAL CODE FOR ASSOCIATION WITH AV CONTENT
GET IMAGES
S321
S322
TWO-DIMENSIONAL CODE IMAGE INCLUDED ?
NO
YES
RECOGNIZE TWO-DIMENSIONAL CODE
S323
S324
TWO-DIMENSIONAL CODE ASSOCIATED WITH PREDETERMINED AV CONTENT ?
NO
YES
S327
DISPLAY MESSAGE INDICATING ABSENCE OF ASSOCIATION BETWEEN PREDETERMINED AV CONTENT AND TWO-DIMENSIONAL CODE
S325
DISPLAY MESSAGE SAYING THAT TWO-DIMENSIONAL CODE IS ASSOCIATED WITH PREDETERMINED AV CONTENT
S326
NO
END OF PROCESSING DESIGNATED ?
YES
END

FIG. 43

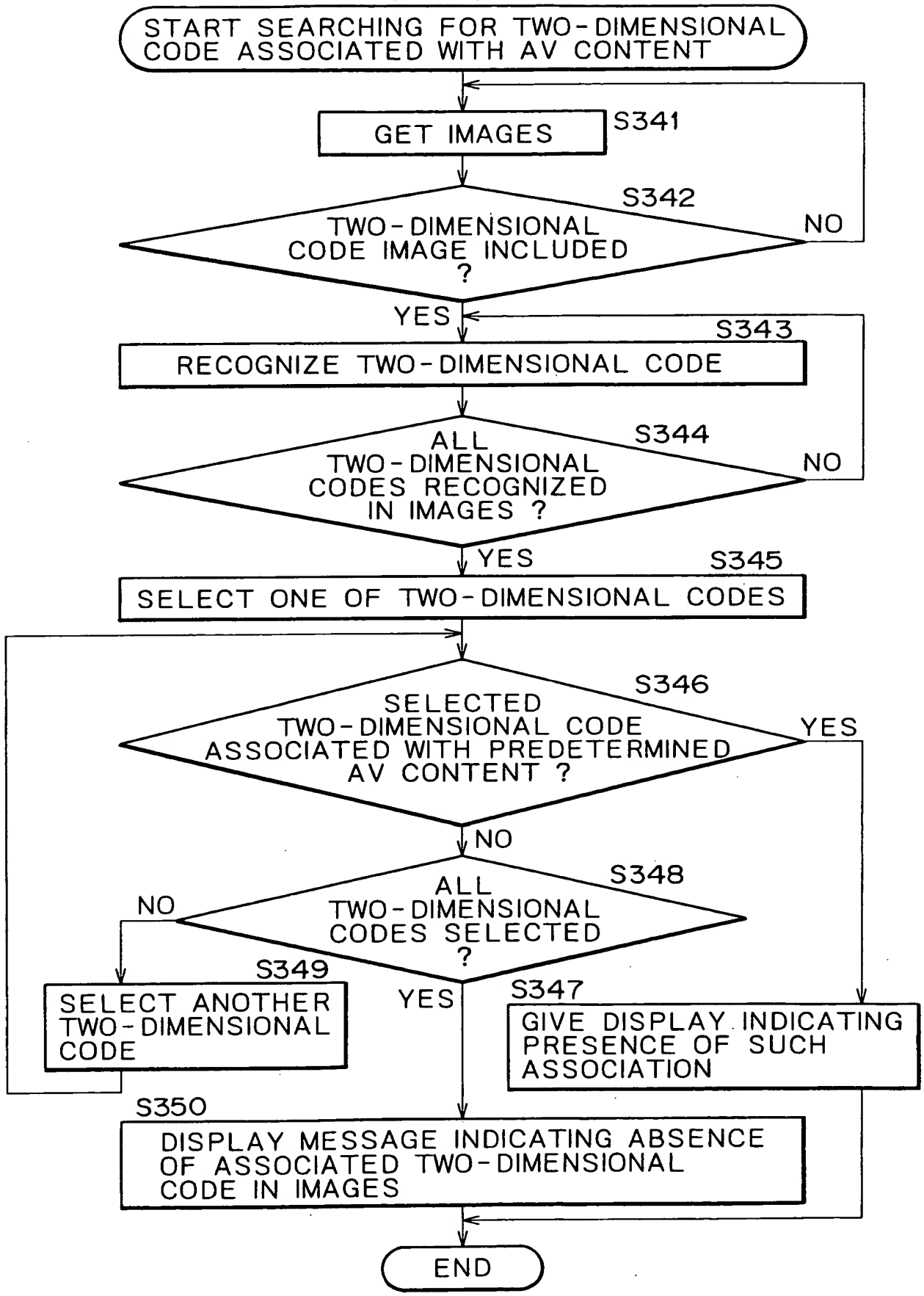
START SEARCHING FOR TWO-DIMENSIONAL CODE ASSOCIATED WITH AV CONTENT
GET IMAGES
S341
TWO-DIMENSIONAL CODE IMAGE INCLUDED ?
S342
NO
YES
RECOGNIZE TWO-DIMENSIONAL CODE
S343
ALL TWO-DIMENSIONAL CODES RECOGNIZED IN IMAGES ?
S344
NO
YES
SELECT ONE OF TWO-DIMENSIONAL CODES
S345
SELECTED TWO-DIMENSIONAL CODE ASSOCIATED WITH PREDETERMINED AV CONTENT ?
S346
YES
NO
ALL TWO-DIMENSIONAL CODES SELECTED ?
S348
NO
YES
SELECT ANOTHER TWO-DIMENSIONAL CODE
S349
GIVE DISPLAY INDICATING PRESENCE OF SUCH ASSOCIATION
S347
DISPLAY MESSAGE INDICATING ABSENCE OF ASSOCIATED TWO-DIMENSIONAL CODE IN IMAGES
S350
END

FIG. 44

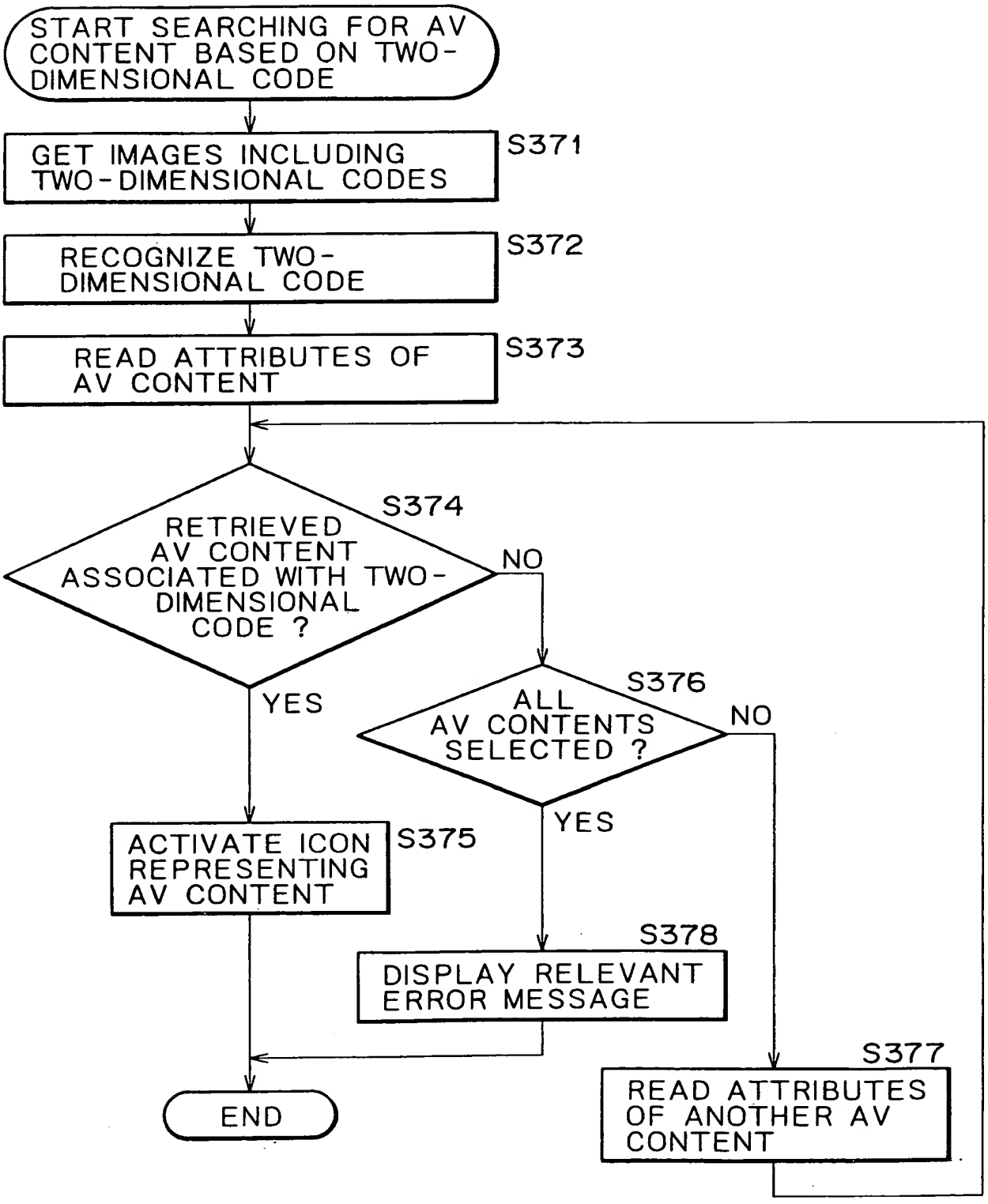
START SEARCHING FOR AV CONTENT BASED ON TWO-DIMENSIONAL CODE
GET IMAGES INCLUDING TWO-DIMENSIONAL CODES
S371
RECOGNIZE TWO-DIMENSIONAL CODE
S372
READ ATTRIBUTES OF AV CONTENT
S373
RETRIEVED AV CONTENT ASSOCIATED WITH TWO-DIMENSIONAL CODE ?
S374
NO
YES
ALL AV CONTENTS SELECTED ?
S376
NO
YES
ACTIVATE ICON REPRESENTING AV CONTENT
S375
DISPLAY RELEVANT ERROR MESSAGE
S378
READ ATTRIBUTES OF ANOTHER AV CONTENT
S377
END

FIG. 45A

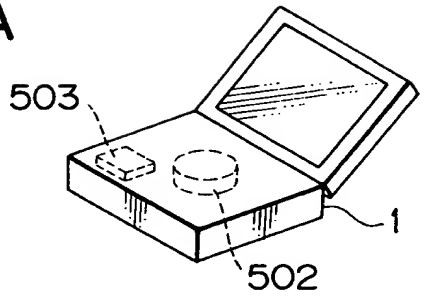

FIG. 45B

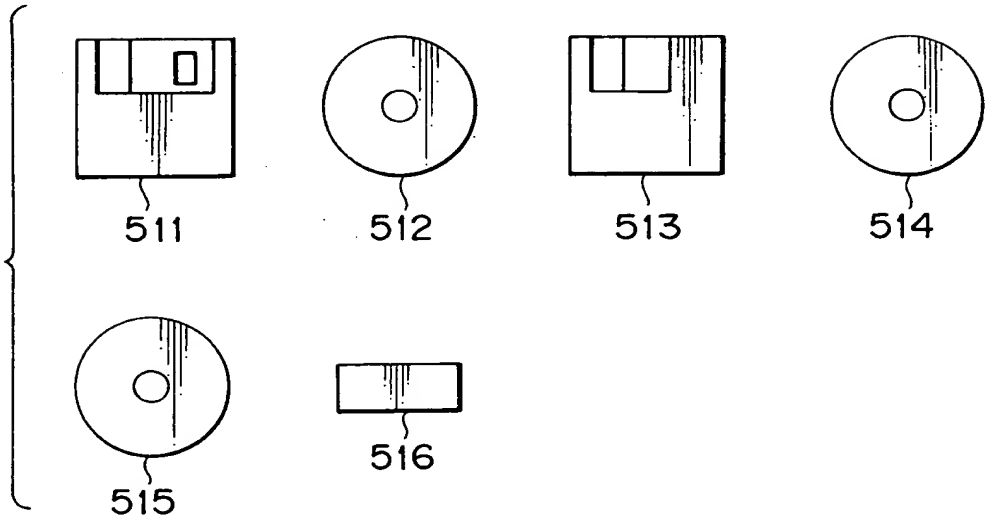

FIG. 45C